

CONSUMER PREFERENCES FOR SECONDHAND FURNITURE

Master's Thesis

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Abstract

With globally growing environmental concerns, consumers increasingly consider sustainability when they make purchase decisions. The market for secondhand furniture is increasing due to environmental concerns, economic reasons, and the increasing availability of secondhand furniture. However, the recycling rate of furniture items remains low. This thesis examined consumer preferences towards secondhand furniture - what makes such furniture desirable, and identified various consumer segments with different preferences and thus motivations to choose secondhand furniture over new furniture items.

The study was divided into three main parts: first, attributes of secondhand furniture were identified through a literature review. Secondly, focus-group interviews were conducted to further define the list of attributes. Finally, an online survey utilizing the best-worst scaling methodology was used to measure preferences for different attributes for secondhand furniture, using a dresser as an example. It also measured the respondents' attitudes towards sustainability and interest in secondhand furniture.

The results revealed six consumer segments with differing preferences through Latent Class Analysis. The "Condition" segment prefers secondhand items to look new, and is not motivated by sustainability. They might choose a secondhand product in good condition if they can get a higher quality item. The "Quality" segment values high quality the most, and is not very price sensitive. They are somewhat interested in sustainability, so they are likely motivated by both quality and sustainability. The "Story" segment is motivated by the item having an interesting history, while the "Sustainability" group chooses secondhand due to environmental reasons. The "Sustainability" section also has the highest interest towards both sustainability and secondhand furniture. The "Uniqueness" segment chooses secondhand to get something unique, and the "Price" segment is mainly motivated by a lower price, and has the lowest interest towards both sustainability and secondhand furniture.

Keywords consumer preferences, secondhand furniture, best-worst scaling, maxdiff, clustering

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Samalla kun huoli ympäristöstä kasvaa globaalisti, yhä useampi ottaa huomioon ympäristöystävällisyyden kulutuspäätöksiä tehdessään. Käytettyjen huonekalujen kauppa kasvaa ympäristö- ja taloudellisista syistä sekä tarjonnan lisääntyessä. Huonekaluja kierrätetään silti vielä melko vähän. Tämä päättötyö tutki kuluttajien mieltymyksiä liittyen käytettyihin huonekaluihin ja identifioi useita asiakassegmenttejä joilla on eri mieltymykset ja siten syyt ostaa käytettyjä huonekaluja uusien sijaan.

Tämä tutkimus jakautui kolmeen osaan. Ensimmäisessä osassa käytettyjen huonekalujen ominaisuuksia tunnistettiin kirjallisuuskatsauksen kautta. Tämän jälkeen listaa ominaisuuksista kehitettiin ryhmähaastatteluiden avulla. Lopulta best-worst scaling (maxdiff) menetelmää hyödyntävää kyselytutkimusta käytettiin mittaamaan kuluttajien mieltymyksiä käytettyihin huonekaluihin liittyen, käyttäen lipastoa esimerkkinä. Kyselytutkimus tutki myös vastaajien mielipiteitä liittyen kestäväan kehitykseen sekä kiinnostusta käytettyjä huonekaluja kohtaan.

Tutkimus löysi faktorianalyysia hyödyntäen kuusi asiakassegmenttiä, joilla on keskenään eri mieltymykset. "Kunto" asiakassegmentti suosii uudenveroisia huonekaluja, eikä ympäristöystävällisyydellä ole heille juuri väliä. Tämä segmentti saattaa valita käytetyn tavaran uuden sijaan, jos he saavat samalla rahalla parempaa laatua. "Laatu" segmentti painottaa eniten tavaran korkeaa laatua, eikä hinta vaikuta päätökseen suuresti. Tämä segmentti on jonkin verran kiinnostunut myös tuotteen ympäristöystävällisyydestä, joten he valitsevat käytetyn uuden sijaan todennäköisesti sekä laatu- että ympäristösyistä. "Tarina" segmentti preferoi, että tavaralla on mielenkiintoinen historia, kun taas "Ympäristö" segmentti valitsee käytetyn tuotteen uuden sijaan ensisijaisesti ympäristösyistä. "Ympäristö" segmentti oli myös kiinnostunein sekä kestävästä kehityksestä että käytetyistä huonekaluista. "Uniikki" segmentti valitsee käytetyn tavaran saadakseen uniikin tuotteen, kun taas "Hinta" segmentti valitsee halvimman tuotteen ympäristösyistä välittämättä. "Hinta" segmentti oli myös vähiten kiinnostunut sekä kestävästä kehityksestä, että käytetyistä huonekaluista.

Avainsanat kuluttajien mieltymykset, käytetyt huonekalut, best-worst scaling, klusterointi

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1. INTRODUCTION

Global warming and the resulting environmental issues are more and more present in our daily lives and shape how we consume goods and make purchase decisions. With globally growing environmental concerns, also the importance of sustainability when making purchase decisions is expected to increase. This thesis will look at consumer's attitudes towards sustainability and how they translate to customer preferences in the context of secondhand furniture.

Laroche et al. (2001) studied the profiles of consumers who are willing to pay more for environmentally friendly products, they wrote how consumers are becoming increasingly environmentally conscious and consider environmental issues when they are making purchase decisions. According to them, the willingness to pay for environmentally friendly products has also been on the rise. There is a growing interest in alternative channels for consumption, such as second-hand stores, driven by critique of conventional retailers (Guiot & Roux, 2010).

The UN has set global Sustainable Development Goals (SDGs) with a deadline of 2030. One of the most important challenges that the SDGs attempt to tackle is climate change, for example by trying to reduce the amount of harmful greenhouse gas emissions. By 2030, consumption in fast growing nations such as China and India will have doubled, and global consumption has an even greater impact on the environment (Luz Gonzalez, 2019). As De Medeiros and Ribeiro (2017) wrote, in a capitalist economy much of human behavior is centered around consumption, and therefore in order to achieve sustainable development goals consumers need to be offered sustainable consumption choices. There is no single definition for a sustainable product, but in general they often make better use of resources such as water, energy, and land as other similar products, and often they are made so that they can be recycled after use. As Goncharenko (2014) wrote,

“The recycling and reuse of products, materials, and wastes have significant potential for increasing material efficiency and reducing environmental impacts”.

In general, when the market for used goods increases, the market for new goods reduces, thereby decreasing the demand for resources such as raw material, energy, and water. The end goal of this type of development could even be an economy where all goods are reused and recycled. However, we are still far from this.

A major consumption category to look at is home furniture. After all, it is something that globally nearly everyone needs and purchases: in 2018, the estimated global market size of furniture products was USD 575 billion with an estimated compound average growth rate of around 5% (Pulidindi & Pandey, 2018). At the same time, consumers are throwing out more and more furniture due to the emergence of “fast furniture” - furniture that is manufactured cheaply and quickly to respond to current trends in interior design. This cheap and often low quality furniture leads to consumers being more prone to throw it away quickly to replace it with newer and trendier items. Currently in the US, Americans throw away over 12 million tons of furniture annually - six times more than in the 1960’s (Cummins, 2020). In the EU, the amount of annual furniture waste is almost 11 million tons, with most of it going to landfills and only around 10% of it being recycled. The items that are recycled are often recycled by commercial secondhand shops, social enterprises, or through online exchange platforms such as eBay or Facebook Marketplace (Circular Economy in the Furniture Industry Report, 2017).

Considering the low level of furniture currently being recycled, a great opportunity for more sustainable consumption is reducing the amount of furniture that ends up in landfills. This challenge could be divided into two major parts: making it easier to recycle furniture and to buy secondhand items through increasing availability, and changing the attitudes of consumers by making it more of a social norm to favor sustainable consumption alternatives. With consumer attitudes already shifting with the globally growing concerns towards climate change, also the market for secondhand furniture is growing both offline and online. This is driven by increasing availability of secondhand furniture, which consumers prefer due to both environmental and economic reasons. Even though the market is estimated to grow at a compound average growth

rate of around 6%, it still remains fragmented without being dominated by major players (Mordor Intelligence Report, 2017).

Sustainable consumption is therefore clearly an extremely important phenomenon to look at, and an increasingly popular research topic. This thesis will analyze sustainable consumption from the perspective of secondhand goods, more specifically furniture. As mentioned before, consumer attitudes are a key factor in making the shift in consumption, and the furniture market is a market with a large environmental footprint and currently fairly low levels of reuse. Therefore, this thesis will look at customer preferences and attitudes towards secondhand furniture, and attempt to analyze consumer motivation to choose secondhand. The aim is to learn ways how the shift to more sustainable consumptions, in this case secondhand furniture, could be encouraged.

1.1 Research objectives and questions

This thesis aims to identify attributes of sustainable products that customers value the most. This will be done in the context of secondhand furniture. This thesis will also try to cluster the respondents into segments based on their preferences. The aim is to find ways to encourage more consumers to switch to more sustainable consumption alternatives by identifying drivers and possible barriers of buying secondhand furniture items. This thesis wants to find out what makes consumers choose secondhand options instead of new ones. It will also look into the attitudes towards sustainability among the respondents, and analyze how they relate to their consumer behavior. The results can be utilized by commercial secondhand shops to optimize their strategy related to for example their sourcing of new items and the preferred marketing messages of consumers, as well as ways to reach new customer segments.

The motivation for this thesis stems from the author's own interest towards sustainability as well as old furniture. The author has already made the shift in her consumption to prefer secondhand items, and in the process became very passionate about the topic. She wanted to look into this

phenomena in more detail and find out ways to make more and more consumers make this shift in their consumption habits. The research questions for this thesis are the following:

Q1. What attributes of secondhand furniture do consumers value the most?

Q2. Can different consumer segments with differing preferences be identified and if so, what are their profiles?

Q3. How are consumer preferences linked to their attitudes towards sustainability?

2. LITERATURE REVIEW

This section will first look at literature related to consumer preferences towards sustainability: what products have been looked at, which methods have been used, and some key results. This will be followed by a review of literature about the secondhand furniture market in general and its characteristics, such as typical consumer motivations, consumer segments, and product preferences. Finally, the third section will look at some product attributes of secondhand furniture that were identified through the literature review and can be then used as a basis for further research.

2.1 Consumer preferences for sustainability

There are multiple studies that analyze consumer preferences related to sustainable products and consumption, although it is a relatively new research topic with the amount of publications increasing after the year 2012 (Bangsa & Schlegelmilch, 2020). Within that research, sustainable product attributes are a key research topic, followed by customer segmentation. Sustainable products can be defined as “products with positive social and/or environmental attributes” (Luchs et al., 2010, as cited in Bangsa & Schlegelmilch, 2020), but research until date has mainly looked at product attributes from the perspective of environmental sustainability. Product categories that have been so far studied include wine (Tait et al., 2019), cut roses (Berki-Kiss & Menrad, 2019), convenience food (Stranieri et al. (2017); Mancini et al. (2017); Annunziata & Vecchio (2016); Moser & Raffaelli (2012)), wool products (Peterson et al., 2012), single use spoons, reusable water bottles, and home washing machines (Goucher-Lambert & Cagan, 2015).

The most common methods in the aforementioned studies have been discrete choice experiment (DCE) (for example Tait et al., 2019) and conjoint analysis (for example Berki-Kiss & Menrad (2019); Annunziata & Vecchio (2016); Bask et al. (2012); Peterson et al. (2012)). Most studies have thus utilized surveys to conduct the research, but a study by Stranieri et al. (2017)

conducted face-to-face interviews instead and analyzed the results through structural equation modeling. Also Moser & Raffaelli (2012) analyzed consumer preferences for sustainably produced apples by conducting non-hypothetical choice experiments to consumers in supermarkets.

Conjoint analysis is a widely used methodology for measuring consumer preferences, as it simulates buying decisions and through respondents making trade-offs between product attributes allows calculating the impact of each attribute to customer preferences (Berki-Kiss & Menrad, 2019). Conjoint analysis can also be utilized in analyzing the consumers' marginal willingness to pay (Bangsa & Schlegelmilch, 2020). For identifying customer segments, latent class analysis has been used (Berki-Kiss & Menrad, 2019).

There are many product features that are related to sustainability, and it seems there is no consensus among researchers on a standard set of features. According to Bangsa & Schlegelmilch (2020), sustainable products can be divided into socially sustainable products and environmentally sustainable products. Social sustainability attributes include for example fair treatment of employees and suppliers, offering safe products that provide value to the consumer, and promoting the development of healthy and rewarding communities. Environmental sustainability attributes include preserving natural resources, the environment and animals, and are mainly related to waste, pollution, resource usage, and ecosystems. Even though it can be assumed that different features are important for different products and services, it remains somewhat unclear which ones the consumers value the most. The decision making process also naturally involves trade-offs: Luch & Kumar (2017, cited by Bangsa & Schlegelmilch, 2020) concluded that customers are more likely to trade-off hedonic than utilitarian value for sustainability (for example aesthetics instead of functional performance).

However, it does seem that certain consumers are willing to pay a premium price for sustainable features. As general awareness and the demand for sustainable products increase, it can be assumed that the amount of such consumers will increase. However, some studies, such as

Annunziata & Scarpato (2014) and Torma et al. (2018), have discovered that even though many customers claim to be concerned about environmental issues and say they consider sustainability when making consumption choices, it does not often actually translate into responsible consumption, but consumers make the purchase decision largely based on brand and price instead of sustainability attributes. Their study looked at food products, so this might vary between different product groups. This might be explained by decision fatigue. As Mancini et al. (2017) state: “when consumers are overloaded with information that exceeds their processing limits, they tend to base their decision making on heuristics, focussing their purchase decision on brands as a proxy for product-related characteristics, such as taste, quality, convenience, origin and so on, instead of evaluating products according to multiple characteristics”. Especially when evaluating products with multiple features such as taste, smell, packaging, size, nutrition etc., consumers might get overwhelmed and therefore their sustainable intentions do not translate to actual consumption choices.

A study by Bask et al. (2012) identified relevant product features relevant to sustainable development in the context of mobile phones and supply chain management. The research consisted of two main phases: semi-structured interviews to identify key features followed by a choice-based conjoint analysis. Their research identified the following sustainable development attributes to be the most relevant ones: physical strength and length of life, updating characteristics, recycling, waste processing in production, and ethical labor and suppliers. Bask et al. (2012) also identified those consumer segments which were willing to pay a premium for a sustainable product. Berki-Kiss & Menrad (2019) did a study executed in a similar way on cut roses in Germany, and found out that labels related to sustainability (namely the Fair Trade label) were the most important product attribute for consumers.

Studies have found a strong positive relationship between consumers who are concerned about the environment and preferences for attributes related to sustainability in products (for example Stranieri et al. (2017); Bask et al. (2012)). Some studies, such as Mancini et al. (2017), also found that adults are more likely to consider sustainability than elderly people, as well as people

living in rural areas compared to cities. However, Bask et al. (2012) found that younger people are less likely to consume environmentally friendly products: they are often more expensive, and younger people have less money to spend. The higher the person's education, the more likely they will make sustainable consumption choices. Laroche et al. (2001) studied the profiles of consumers who were more willing to pay more for environmentally friendly products, and found out that they are more likely married, female, have children living at home, are environmentally conscious, and value safety and warm relationships with others. Multiple studies have mentioned that consumers who value sustainability related attributes the most are often female. Brought et al. (2016) researched the gender gap in sustainable consumption, and suggested that it is caused by the widespread association between green consumption and femininity, and thus men avoiding green products due to concerns related to their gender identity and masculinity.

Bangsa & Schlegelmilch (2020) looked at past research from the years 2008 to 2018 related to the relationship between sustainable product attributes and consumer decision-making. They found that the findings of past research on the topic, which has focused largely on food products and on environmental sustainability, have been fragmented and even contradictory, and they have neglected social sustainability as well as cultural context. They also found out that past research has often assumed that the decision making process of consumers is linear and rational, which in reality is often not the case.

2.2 Secondhand furniture market

Decorating homes is a way of building identity and expressing personal taste, lifestyles, values, and norms (Hakala et al., 2015). In addition to showcasing the visual style of the consumer, many also choose to portray their values by choosing for example design pieces, items manufactured in their country of residence, or secondhand products to their homes.

The global market for secondhand furniture is increasing alongside “downshifting”: opting for a simplified style of life and reducing work and/or consumption (Roux, 2008). This trend is visible among all social classes and is driven by a motivation to for example make the most of one’s time or by ecological and political motives. A willingness to downshift often leads to an increased consumption of secondhand goods. Instead of the cycle of “working more, earning more, and spending more”, consumers switch to increasingly repairing, reusing, sharing, and making items themselves as alternative behavior for excessive spending and waste creation. Also secondhand is a way of alternative consumption. According to Roux (2008), the two most common motives for choosing used goods are ethical/environmental and financial (used goods are often cheaper than new ones). A third motive worth mentioning is social: preferring used goods can be a way to build one’s identity and express their values and personal style. In addition to these three, he also mentions that some consumers collect specific secondhand items. These can for example be old toys, musical instruments, glassware, handmade carpets, or artwork. Naturally these motives can also go hand in hand. Often the increase in a consumer’s secondhand consumption goes hand in hand with dissatisfaction towards “traditional” retail channels. As an interviewee in the study by Roux (2008) said:

“What is the point of rushing to the supermarket? Secondhand markets and stores are full of things people no longer want and which are still in perfect working order. Why pay more, why buy at high prices when high quality goods are thrown out?”

Roux also points out that used products are not always better than new ones (a good example is old and energy inefficient cars), and secondhand consumers often fail to consider the production of the items in the first place. As an example, the “fast furniture” manufacturer Ikea has started a campaign where they buy back and sell consumers secondhand Ikea items alongside their new products in their stores. This might lead to an increased consumption of also new Ikea items, when consumers feel like it is more “acceptable” to shop at Ikea and then just give the old product back to them after use.

Unlike with many other sustainable product groups, the sustainability attributes of secondhand items do not need to be communicated and explained to the consumer. Research related to other products, such as food products or electronics, has often looked at how the sustainability of the product is communicated to the customer. These methods include for example different sustainability labels (organic, fair trade), packaging methods (less material used for the package, packaging made from recycled or biodegradable materials), or claims related to sustainability on the product (Bangsa & Schlegelmilch, 2020), and they are necessary since sustainability attributes are often such that the consumer would not otherwise know about them. It can be assumed that these methods related to the communication of sustainability attributes do not apply in the context of second hand furniture, since buying a used item in itself makes the item a sustainable choice.

Guiot & Roux (2010) looked into the motivations of secondhand shoppers. According to them, secondhand products are not preferred solely due to a generally lower price, but they also have recreational benefits: consumers enjoy the “hunt” for unusual, unique items. In general, they found out that the motivation to shop secondhand products consists of three main motivations that are strongly interwoven: financial motives (saving money), recreational motives (browsing through interesting items, “treasure hunting”), and critical motives (avoidance of the classic market system due to ethical and ecological concerns). Guiot & Roux (2010) identified four consumer segments. The biggest segment (30,4% of the sample), shops second-hand mainly due to economic reasons, as well as criticism towards traditional retailing. The second biggest group (28,5% of the sample) are motivated strongly by all the aforementioned motivations as well as a desire for uniqueness, and they shop second-hand actively. The third biggest group (19,3%) shop second-hand due to recreational reasons and look for fun and nostalgic products, while the final group (21,7%) shop second-hand only occasionally for a specific need.

Louise Jack (2009) found that at least in the UK market a lot of consumers switched to secondhand goods during an economic downturn. In the UK, all adult consumers have stated that they would be willing to buy something secondhand. This motivation is mainly explained by the

desire to save money, but a lot of consumers also mentioned that they “love to get a bargain” - this again refers to the recreational motives driven by the excitement of “treasure hunting”. In the study, male respondents were more likely to value financial reasons, while women put more emphasis on the excitement of treasure hunting. Of female respondents, 21% preferred secondhand clothes over new ones. Environmental reasons were also mentioned, but they were not as popular (9% of respondents indicated environmental reasons as their main motivation).

To summarize, the motives that several research papers have identified as the drives of secondhand consumption seem to be mostly in unison. They include financial motives (secondhand products tend to be more affordable than new products), ecological motives (buying pre-used products saves natural resources), and social (building one’s identity through secondhand purchases, or alternatively collecting them). As Roux (2008) put it,

“... secondhand buying is not so much a laborious as an exhilarating expression of voluntary simplicity, that helps resolve antagonistic tensions – between pleasure and guilt – linked to consumption.”.

2.3 Consumer attitudes towards sustainability

As mentioned in the previous chapter, sustainability can be divided into social sustainability and environmental sustainability (Bangsa & Schlegelmilch, 2020). Social sustainability means for example fair treatment of employees and suppliers, offering safe products that provide value to the consumer, and promoting the development of healthy and rewarding communities. Environmental sustainability means preserving natural resources, the environment and animals, and are mainly related to waste, pollution, resource usage, and ecosystems (Bangsa & Schlegelmilch, 2020). One common definition of sustainable development is *“development that meets the needs of the present without compromising the ability of future generations to meet their own needs”* by the Brundtland Commission (Bask et al., 2020).

There is no one and established scale to measure consumer attitudes towards sustainable development (Bask et al., 2020). Multiple different scales developed for different purposes have been used to measure consumer attitudes towards sustainable development, for example a 26-item scale by Stone et al. (1995) to measure environmentally responsible consumers, a 6-item scale by Haws et al. (2014) to measure “green consumption values”, and a 18-item scale by Balderjahn et al. (2013) to measure consciousness of sustainable consumption. Bask et al. (2020) adopted a scale used by TNS Kantar Finland, a large market research company in Finland, to measure consumer attitudes towards sustainable development, as this allowed comparing the results to the nationwide sample.

3. PRODUCT ATTRIBUTES OF (SECONDHAND) FURNITURE

This section will build on top of the literature review by looking at product attributes in more detail. It first looks at product attributes of furniture in general. This will be done in the context of a typical piece of furniture, in this case a small dresser. The second part of this section will look at the attributes of secondhand furniture and how the previously mentioned attributes of furniture relate to used furniture. Again, the example of a small dresser will be used. Finally, this section will be concluded by listing the product attributes that are deemed relevant and that will be included in this study. These will be then later further analyzed and refined through focus-group interviews, before conducting a quantitative research on these attributes.

3.1 Product attributes of new furniture - case dresser

A study by Serin & Anda (2012) concluded that consumers generally put a considerable amount of thought and emphasis into purchasing furniture. A piece of furniture is generally something that the consumer will keep and use for a long period of time, and it is generally a more expensive purchase than for example clothing items or household products, which explains the amount of thought and emphasis put into the purchase decision. Serin & Anda (2012) roughly divide the product attributes of furniture into functional, economic, and aesthetic attributes. More specifically, according to them the most important attributes when choosing furniture are quality, price, and design. Also Mohamed & Yi (2008), who studied the attributes of wooden living room furniture in Malaysia, found that the most important attributes according to the respondents were in the order of importance quality, design, and price. These can be labeled as functional (quality), economic (price), and aesthetic (design) attributes. The origin of the furniture product and the brand name were not deemed as important in the study by Mohamed and Yi (2008). However, as Mohamed and Yi (2008) wrote, “quality” can mean different things to different consumers. It can be that the piece of furniture is durable and will last for many years, or that it is for example well built and not wobbly. “Quality” could be further divided into more specific attributes, such as

“material”, “longevity”, “durability”, “detailing”, etc. Quality is also an attribute that is linked to price: consumers generally assume that higher price is related to higher quality.

An attribute that the previously mentioned studies did not mention is the experience when purchasing the piece of furniture. This can include things such as customer service, delivery options, and payment options. Oblak et al. (2020) discussed the attribute of customer service in a study that looked into consumer preferences for furniture material, price, and service between consumers in Slovenia, Serbia, and Croatia utilizing conjoint analysis. In all countries, respondents ranked price as the most important attribute, followed by material and price. Service was not a very important attribute to the respondents, which can partly explain why other authors have not included it in their studies. Considering materials, solid wood was generally the most preferred one. Also numerous other authors have found that consumers tend to prefer furniture items made from solid wood. Solid wood can be associated for example with the durability, style, and sustainability of the furniture item.

A study by Bigsby & Ozanne (2002) that using a conjoint analysis looked into the relative importance of attributes of wooden outdoor furniture to consumers in New Zealand and found out that the local consumers were most concerned about the origin and sustainability of the wood used for the furniture. The most important product attributes of wooden outdoor furniture for consumers in New Zealand were in the order of importance origin country of the wood (local was preferred to imported wood), type of wood source (plantation preferred to natural forest), timber environmental certification, and the length of the warranty for the furniture. In this study, consumers ranked price as the least important attribute. This is contrary to the results in for example Oblak et al. (2020), where price was ranked as the most important attribute. However, Oblak et al. (2020) conducted their study in Slovenia, Serbia and Croatia. Demographic differences such as differences in the income levels of respondents most likely heavily influence the results. Also the study design is likely to affect the results: in the study done in New Zealand by Bigsby & Ozanne (2002), the study put heavy emphasis on sustainability related attributes and did not include attributes related to for example quality and design. On the other hand, Oblak

et al. (2020) did not discuss sustainability related attributes in their study. Bigsby & Ozanne (2020) identified four consumer segments: those who value environmental certifications, those who are interested in the method of how the wood was grown, those who value domestic products and are somewhat price sensitive, and those who consider price as the key attribute when selecting wooden outdoor furniture.

3.1.1 Sustainability related attributes of new furniture

Sustainability can also be considered an important attribute of furniture products. It used to not be given much importance, but at current times with increasing environmental concerns more and more consumers are concerned about the sustainability of furniture. The sustainability of a piece of furniture can be divided into environmental sustainability (sourcing of materials, waste, pollution), and social sustainability (fair treatment of employees and communities). Especially environmental sustainability, and how the wood is sourced for wooden furniture has been recently getting attention. To put fuel to the fire, the media has been increasingly posing critique on so-called “fast furniture”, with documentaries and articles that educate consumers about large furniture companies sourcing their timber in an unsustainable way and therefore contributing to deforestation. A good example of this is the recent claims that IKEA is using suppliers for timber that are illegally deforesting areas in Ukraine (Webster, 2020).

De Medeiros & Ribeiro (2017) looked at expected attributes in the purchase of environmentally friendly furniture in Brazil. Their analysis started with a qualitative study followed by a quantitative one. In the qualitative study, when participants were asked to name product attributes that they value when considering environmentally friendly furniture, the most mentioned attributes were the use of recycled materials, if the production encouraged deforestation, if the piece of furniture is easy to maintain, and the origin label. Participants valued the use of organic and recycled materials in furniture production, and especially younger respondents also valued reverse logistics meaning the opportunity to return the piece of furniture

to the seller after use. When De Medeiros & Ribeiro (2017) validated these results through a quantitative study, the most important attributes in the order of importance were the following: design, origin label, durability, and production that prevents deforestation. The respondents did not perceive a financial or social risk in the consumption of sustainable products, but they did express some concerns over their performance.

Anderson & Hansen (2004) also utilized conjoint analysis to determine the impact of environmental certification on preference for a wooden CD rack. They included five product attributes in their study: price, wood type, environmental certification, adjustability of shelves, and storage capacity. These attributes were picked from a list of 16 wooden CD rack attributes that were most frequent in promotional materials by a survey that measured their relative importance. Anderson & Hansen (2004) decided to ask the respondents to imagine the size and color of the product to match their needs, therefore eliminating any aesthetic attributes. The respondents, consisting of US undergraduate students, ranked price as the most important attribute, followed in the order of importance by wood type, wood origin, adjustability, and storage capacity. However, the results had significant differences between different consumer segments that they identified: for respondents that placed high importance on sustainability, the attribute wood origin was 2,5 times more important than price.

Holopainen et al. (2014) studied sustainable wooden terrace products in the Finnish market. They used the following attributes in their study, listed in the order of relative importance to Finnish consumers: material durability, origin of timber, appearance of material, material safety for health, domestic timber, ethical production, perceived responsibility of manufacturing company, environmental impact, forest certificate, low price, trendiness, and brand. Older respondents, as well as female respondents, were more likely to favour sustainability related product attributes. In general, the respondents valued the sustainability and the quality of the product, while price and the product image were ranked low.

3.1.2 Aesthetics related attributes of new furniture

The previously mentioned studies have focused on sustainability, functionality, or quality related attributes. However, aesthetic attributes have also been studied. For example, Ciritcioglu et al. (2017) looked at the color preference of consumers on furniture surfaces and found that consumers considered the type of surface finishing or color applied on the surface an important attribute of wooden furniture. In the study, that featured Turkish consumers, an opaque painting on furniture was less preferred to the natural finish on wooden furniture with for example a stain or a lacquer on top. However, this study is limited to only the Turkish market. According to the study by Mohamed & Yi (2008), there can be some demographic differences. For example, women tend to give more importance to the style and design of the piece of furniture. It can also be assumed that the preferred type of finishing and design depends on the geographic location of the respondents, as it is influenced by the culture and current trends in the area. More attributes related to the design of the item in addition to the type of finishing is style (industrial, rustic, mid century, bohemian, etc.), color, material, shape, size, and other visual attributes of furniture as seen in for example Ordonez et al. (2014).

Shanat & Saili (2018) has consumers assess two prototypes of wooden chairs with the main focus being in the design and physical appearance of the chair prototypes. They categorized the attributes of those chairs as “form, aesthetic, and utility”. Shanat & Saili (2018) listed the following attributes under these categories: function, finish, appearance and image (aesthetic attributes), material, size, safety, durability, and practicality (form attributes), and brand identity, price, design concept, ergonomics, and elements and principles of design (utility attributes). In addition to the aesthetic attributes of the chair prototypes, the respondents considered the safety of the chair (in terms of construction and jointing) and a feeling of durability as important product attributes. When considering the example of a wooden dresser, safety might be less important than with a chair, as one does not sit on a dresser.

3.1.3 Summary of product attributes of new furniture

Based on previous literature, attributes of furniture that have been included in previous studies include price, quality (that includes durability and quality of construction or sturdiness), material, sustainability (that includes ethical manufacturing, source of timber, and environmental certifications), trendiness, brand, safety, functionality, design, type of finishing, color, and service. A study by Atilgan et al. (2018) listed a greater number of product attributes of furniture, that included price, durability, length of life, comfort, easy to carry, easy to clean, demountability, functionality, fashionability, compatibility with other household furniture items, design, and the social status related to the item. To conclude, based on which attributes were most often discussed in literature and how the study respondents ranked their importance, the most important attributes in the context of a new dresser seem to be the price, durability, sturdiness, type of material, source of material, sustainability of material, and trendiness.

3.2 Product attributes of secondhand furniture - case dresser

Instead of looking at new furniture items, this section will look at secondhand furniture, so furniture that has been bought used. The attributes of secondhand furniture naturally have some overlap with the attributes of similar new furniture. For example, of the list of attributes related to new furniture that was identified in the previous section (price, durability, sturdiness, type of material, source of material, sustainability of material, and trendiness), most can be applied also to secondhand furniture. Of this list, it can be assumed that the sustainability attributes (source and sustainability of material), do not apply as such to secondhand furniture, as the consumer who purchases a secondhand item is not financially supporting the original manufacturer of the item.

3.2.1 Sustainability related attributes of secondhand furniture

Related to sustainability attributes, which can be generally divided into environmental and social sustainability, environmental sustainability is more relevant in the context of secondhand goods. Social sustainability attributes relate to for example the fair treatment of employees and communities, but in the case of secondhand items the production of the item is not very relevant, since when a consumer buys a secondhand furniture item, they are usually not in any way financially supporting the original manufacturer of the item. Therefore, it can be said that many of the social sustainability attributes of the original product, such as production methods and fair treatment of employees, do not apply anymore to secondhand products.

In addition to attributes related to social sustainability, also many environmental sustainability attributes, such as those related to waste and pollution caused by manufacturing the product, do not directly apply to secondhand furniture. For example, the origin of the timber used for the product is not relevant in the context of secondhand wooden furniture, as again the consumer does not directly support the manufacturer of the item when purchasing the item used. Even if the secondhand furniture item in question is sourced from another geographical location and transported to the consumer, it will still use significantly less natural resources and produce less waste and pollution than a similar new product generally would. The main environmental benefit of consuming secondhand products is the extended lifespan of the product in question, and thus saving the resources that would have been needed to manufacture a new product instead. Therefore, as it can be said that a secondhand product is sustainable in itself, instead of more specific sustainability attributes related to for example production materials, pollution, etc. As discussed in section 3.2, some studies (such as Roux (2008); Guiot & Roux (2010)) found that many secondhand shoppers were critical towards traditional retailers due to ethical and environmental concerns, and thus opted for secondhand goods. Like Jack (2009) wrote, consumers consider secondhand goods “greener”. This confirms the assumption that consumers consider secondhand goods sustainable in themselves. Therefore, this thesis will consider “sustainability” as a relevant attribute of secondhand furniture.

3.2.2 Other attributes of secondhand furniture

An important attribute of new furniture was durability, and this can also be considered an important factor of secondhand furniture. A durable, quality item will likely last for many years thus contributing also to the sustainability of the item. Related to quality or length of life, consumers might consider that secondhand furniture are higher quality and have a longer lifespan than new furniture as they have already stood the test of time. Alternatively, consumers can access higher quality furniture that is made to last due to the lower prices of secondhand furniture compared to new products, which might lead them to associate quality with secondhand furniture. This thesis will therefore consider “quality/durability” as an important attribute of secondhand furniture.

This leads us to another important product attribute of secondhand furniture, which is price. All studies listed the lower prices of secondhand products as an important motivation for consumers to purchase them (Roux (2008); Jack (2009); Guiot & Roux (2010)). Consumers can find either very affordable pieces of furniture that cost a fraction of similar new products, or alternatively they can spend a similar amount of money that they would spend on new products but be able to access for example expensive brands that would otherwise be out of their reach. “Brand” can be an important attribute of also secondhand furniture as it is of virtually any other product. However, in the context of secondhand furniture the brand and the related perceptions are not as such directly related to the item being secondhand. Instead, the brand in itself is often the most important attribute, and buying the product secondhand is often mainly a means of being able to access the product at a more affordable price. Due to this reason, as well as the fact that in the previous section, brand was not found to be an important attribute of new furniture, this study will not include “brand” as a relevant attribute of secondhand furniture.

Financially, there are attributes related to the more social reasons for consuming secondhand furniture such as building one's identity. Many studies mentioned the quest for unique items, or “treasure hunting”, as an important motivation for the purchase of secondhand items (Jack

(2009); Guiot & Roux (2010)). Many consumers choose to express their personal style and values through how they decorate their homes, and preferring secondhand items is one way of doing this: secondhand items can be considered more unique than new products, and the consumer can find a wider array of styles to choose from than from among new furniture which are usually based around current trends. Many researchers have discussed how many consumers see shopping for secondhand furniture as “treasure hunting”, and how some see it more as a hobby or as a recreational activity than merely making a purchase to fulfil a specific need. These recreational secondhand shoppers enjoy the activity of looking at used items and wondering about the stories related to those items, and get excited when they make a good find. Therefore, “uniqueness” can be considered as a relevant product attribute of secondhand furniture, as well as “item reflects my personal values”. Relevant attributes might also include “story of the item” and “satisfaction related to “treasure hunting” for the product”.

3.2.3 Summary of product attributes of secondhand furniture

To conclude, based on the literature review relevant product attributes related to secondhand furniture include sustainability, quality, price, uniqueness, reflecting personal values, story of the item, and satisfaction related to treasure hunting for the product.

3.3 Summary

The most commonly mentioned attributes of a new piece of furniture such as a dresser include price, durability, sturdiness, type of material, source of material, sustainability of material, and trendiness. The attributes related to a similar but secondhand piece of furniture include sustainability, quality (which can also be divided into durability, sturdiness, and type of material), price, uniqueness, reflecting personal values, story of the item, and satisfaction related to treasure hunting for the product.

It is apparent that many attributes between new and used furniture are the same. This thesis will look at what attributes consumers value in secondhand furniture (Q1) by comparing them to similar new products, and whether consumer segments can be identified among respondents (Q2). Based on the previous literature, it is expected that respondents can be segmented by their main motivations to prefer secondhand: environmental, financial, or social/recreational. The study will also measure the respondents' attitudes towards sustainability, and look at how that correlates with the results (Q3). It can be assumed that respondents who highly value sustainability will be more likely to prefer the secondhand item versus the similar but new item.

As the preferred style and design of furniture products are heavily influenced by the personal preference and interior design style of the respondent, this study will not look into this attribute but attempt to keep it as a constant. The sustainability of the products will also not be particularly highlighted: the sustainability of a new piece of furniture is a complex matter that considers various product attributes ranging from the material to social implications, and in the context of secondhand products consumers generally consider them sustainable as they are. Therefore, it is assumed that related to sustainability, the respondent will consider the secondhand good is more sustainable than the similar new piece of furniture.

The variable attributes will therefore include price, quality-related attributes (durability, type of material, sturdiness), and social or recreational attributes (uniqueness, reflecting personal values, story of the item, and satisfaction related to treasure hunting for the product). These initial attributes can be now further analyzed and confirmed through focus group interviews. In the next sections of this thesis these attributes will be further defined through interviews, after which a survey will be conducted to measure their importance as well as how they related to consumer's attitudes towards sustainability.

4. METHODOLOGY

4.1. Focus-group interviews

Focus-group interviews, or group depth interviews, are a widely used tool in research for its flexibility and ability to provide rich data about perceptions, thoughts, feelings, and impressions of group members (Steward et al., 2007). Focus-group interviews are flexible due to the many options in how to execute them: interviews can be general or specific, structured or unstructured, and can make use of additional activities such as visual stimuli. They are especially useful in generating ideas, or exploring the ways specific groups of people think. However, as the sample size is often small, they are not well suited for applications where the band of confidence is small.

Focus-group interviews work well in studies that seek to discover factors that influence behavior, motivation, opinions, or feelings and ideas that people may have about something (Bask et al., 2012). During the focus-group interviews, the participants have an interactive discussion about the topic in question. This hopefully leads to participants re-evaluating their thoughts and opinions on the topic, which then in turn leads to new ideas and information being generated during the discussions.

4.2. Multi-item measures

Multi-item scales are defined by Devellis (1991) as “measurement instruments that are collections of items combined into a composite score and intended to reveal levels of theoretical variables not readily observable by direct means”: they are better and more precise than single items at measuring such variables. When using multi-item measures, multiple questions that aim to measure the same variable are formulated and then asked the respondents. One of the most popular methods used is the Likert scale.

When multi-item measures are developed or validated exploratory (or confirmatory) factor analysis plays an important role revealing which questions load on which factors (for a more detailed presentation, see e.g. Devellis, 1991). To evaluate the reliability of the multi-item measures used, for example Cronbach's alpha can be calculated. Alpha should exceed 0,7 for each measure.

4.3 Best-worst scaling method (BWS)

The best-worst scaling method is a way of measuring respondents' strength of preference for a number of known attributes (Louviere et al., 2013). It was introduced by Finn and Louviere in 1992. BWS asks respondents to choose the most and least important/preferred attribute ("the best" and "the worst") from a subset of items based on a longer list of predefined attributes/options. The BWS method is used by academic and practitioners in various disciplines since it forces respondents to make tradeoffs between attributes: instead of just rating the importance of an attribute, the respondent looks at relative preferences between attributes. BWS is used especially in the fields of marketing and health economics (Mielby et al., 2012). On rating scales (for example asking the respondent to rate the importance of an attribute on a scale of 1 to 5) respondents often either choose neutral mid-points or rank many attributes as equally important, while BWS forces respondents to choose extremes instead of mid-points (Pham Thi Thu, 2019).

Therefore, a big advantage of the BWS method is how it provides good results with a relatively simple questionnaire design. In previous research, BWS has been tested against various other methods and it has performed well, even though it has proved to be somewhat demanding to respond to due to the often large amount of questions (Mielby et al., 2012). There are multiple methods of analysis for the data obtained through the BWS study, such as simple best-worst scores, or more sophisticated regression models to predict future behavior (Louviere et al., 2013). The best-worst score (subtracting the "worst" answers from the "best" answers) allows listing all the tested attributes in order of preference. In addition to presenting the results as a

hierarchy of preferences, the data obtained through the BWS method can also be used to identify different customer segments among the respondents using for example Latent class analysis (deSarbo et al., 1995). This recognizes the heterogeneity of the respondents and allows grouping them into clusters with more homogeneous preferences. The respondent level results can be estimated by Hierarchical Bayes Estimation (Allenby et al., 1995).

When formulating a BWS questionnaire, one statement or item is typically shown two to four times to the respondent (Sawtooth Software, N.D.). All items should preferably be shown to the respondent equal amounts to avoid unintentionally signaling to the respondent that the study is “actually” measuring an item that appears more often than others (Louviere et al., 2013). The recommended number of items per question is three to five (Sawtooth Software, N.D.). Therefore, the number of BWS questions in a survey can be calculated by multiplying the number of items by the number of times each item should be shown to the respondents, and dividing the result by the number of items shown per question.

4.4 Latent Class Analysis

Latent Class Analysis (LCA) is often used in discovering market segments from data obtained through best-worst scaling method (Orme, 2012). It divides respondents into segments that have similar preferences by estimating utility scores for each segment and the probability of each respondent belonging to each segment. These segments consist of respondents that are relatively similar to each other within each segment, but have differing preferences from other segments. The analyst will decide on the most suitable number of segments based on some measures produced by LCA software and the managerial interpretations.

Some common measures that are used to decide on the number of segments include Consistent Akaike Information Criterion (CAIC) and Bayesian Information Criterion (BIC). CAIC as perhaps the most important one, is given by the following formula:

$$CAIC = -2 \text{ Log Likelihood} + (nk + k - 1) \times (\ln N + 1)$$

where k is the number of groups, n is the number of independent parameters estimated per group, and N is the total number of choice tasks in the data set. BIC, which is very similar to CAIC, is given by the following formula:

$$BIC = -2 \text{ Log Likelihood} + (nk + k - 1) \times (\ln N)$$

Smaller numbers of CAIC and BIC are preferred, and they reach their minimum at a certain number of clusters unlike some other commonly used measures such as AIC and IC that keep decreasing with a higher number of clusters.

4.5 Hierarchical Bayes method

The Hierarchical Bayes (HB) method is one of the most popular methods for estimating utilities from choice data obtained through for example choice-based conjoint analysis or best-worst scaling: it creates individual-level utilities for each respondent (Howell, 2009). Individual-level utilities allow discovering different preferences and segments among the sample.

The two important probabilities that play a role in the HB estimation are the likelihood and the sample density (Howell, 2009). The likelihood means the probability that when given a specific set of utilities, the respondent will select a specific concept in a choice task. The sample density means the probability that the respondents' utilities are consistent with the pattern of utilities that was observed in the rest of the sample. One of the reasons HB is so widely used is that by modeling individual respondents rather than the average of the sample, HB can distinguish heterogeneity from noise. While Latent Class methods can also deal with heterogeneity, HB is typically better at achieving proper individual-level estimates and it does not require the analyst

to decide the number of appropriate classes (Orme, 2000). However, HB does not allow for detecting segments among the sample or assigning respondents to these segments.

Root-likelihood (RLH), produced using HB estimation, measures how well a choice model fits a data set. The RLH value ranges from 0 to 1, with a higher number meaning a better fit. RLH scores are used to compare how the model fits individual responses: respondents' should perform considerably better than a random set of answers (Sawtooth Software, N.D.). The minimum desirable RLH score depends on the amount of variables.

5. STUDY DESIGN

The empirical part of this thesis consisted of two main parts: first, focus group interviews were conducted to identify relevant product features to be included in the second part of the study. The literature review that was conducted in section 2 served as a basis for the focus-group interviews. Secondly, the attributes that were identified in the literature and the focus-group interviews were further analyzed through a survey using the best-worst scaling method.

5.1 Focus-group interviews

As the literature review concluded, there is no existing agreement about the relevant product features of secondhand furniture. Based on the literature review, some attributes were identified, namely sustainability, quality (which can also be divided into durability, sturdiness, and type of material), price, uniqueness, reflecting personal values, story of the item, and satisfaction related to treasure hunting for the product. Focus-group interviews were used as a method of further considering and refining the set of attributes that consumers value concerning secondhand furniture (Bask et al., 2012).

Three focus group interviews with a total of 9 participants were arranged. Due to the current Covid-19 pandemic, the focus group interviews were held online through the teleconference software Google Meet. The participants consisted of young adults, both students and employed people. All participants had university level education or are currently enrolled as university students, and they were generally at least somewhat interested in secondhand furniture. Some participants were avid secondhand shoppers, while some had limited experiences buying secondhand furniture,

During the focus group interviews, the facilitator first shared a common Google Sheets document with all the participants, which had separate named sheets for all attendees. All the sheets had a

picture of a wooden sideboard from the 50's. The participants were then asked to imagine that they are considering purchasing this sideboard for their homes. After that, they were asked to individually list as many product attributes of this piece of furniture as they could and write them down on the sheet. After the participants were done with their lists, the facilitator of the focus group interview compiled everyone's lists into one long list in a separate sheet alongside the attributes that were previously identified in the literature review. Duplicates were removed from this list. The participants then had a discussion together about the different attributes on the list, and possibly added, modified, or deleted some attributes from the list. The facilitator tried to create a lively and thorough conversation about the topic among all the participants to encourage them to come up with more attributes. To help this, the facilitator shared a picture of a similar new piece of furniture and asked the participants to think of the differences between these items, and what could make them choose the secondhand product instead of the new item (pictures that were used are seen in Picture 1 and Picture 2 below). After the group deemed the long list of attributes as ready, all participants were asked to copy it back to their own sheet. The participants then individually wrote a rating between 0-3 next to every attribute: 0 meant the participant did not consider that attribute relevant at all for their personal consumption choice, 1 meant it is slightly important, 2 that it is moderately important, and 3 that it is very important.



Figure 1: Old sideboard
Picture from
https://cdn.shopify.com/s/files/1/1842/2881/products/asko_borg_A_grande.jpg?v=1501424909).



Figure 2: New sideboard
Picture from
<https://www.kaluste10.fi/product/9158/filippa-senkki-150-cm-tammi-rowico>.

This same process was repeated among all three different focus group interview sessions. The result of these sessions was therefore three lists of attributes of secondhand furniture ranked in order of importance. These three lists were then compiled into one long list of attributes. However, even though there was significant overlap between the three lists, many attributes had been listed and rated only by one group. To allow for better comparison of the relative importance of these attributes, the facilitator contacted the participants again individually and asked them to rate also the attributes the other groups had listed.

5.1.2 Results of the focus-group interviews

The result of the focus interviews was a long list of attributes ranked in the order of importance, as seen in Table 1. The attributes were translated from Finnish to English by the author. The most important attributes to the respondents (attributes that got a score higher than 2.50) include size, quality, price, practicality, and condition. The least important attributes (attributes that got a score of 1 or lower) include satisfaction related to the treasure hunting, age, return policy, and brand. However, there was variance among the respondents: for example, one respondent gave “treasure hunting” a score of 3, while it was not important to most other respondents. This shows how it is impossible to make conclusions from such a small sample size, and gives an indication of the heterogeneity of the sample.

Name	Average score	Standard deviation
Size	2.78	0.42
Quality	2.78	0.63
Price	2.67	0.47
Practicality	2.67	0.47
Condition	2.67	0.47
Durability	2.44	0.68
Style	2.44	0.83

Sturdiness	2.33	0.67
Material	2.22	0.79
Color	2.22	0.63
More value for money	2.22	0.63
Eco-friendliness	2.11	1.10
Avoiding purchasing new items	2.11	0.99
Design	1.89	1.25
Reflects my values	1.78	0.92
Origin country	1.78	0.88
Easy maintenance	1.78	0.79
Classy style	1.78	0.94
Delivery options	1.56	1.07
Production	1.56	0.83
Retro style	1.56	0.83
Uniqueness	1.44	0.68
Warranty	1.22	0.88
Story of the item	1.11	0.94
Customizability	1.11	0.47
Treasure hunting	1.00	0.94
Return policy	1.00	0.74
Age	0.67	0.67
Brand	0.67	0.67

Table 1: Average scores of attributes listed during the focus group interviews in the order of importance

The literature review identified sustainability, quality, price, uniqueness, reflecting personal values, story of the item, and satisfaction related to treasure hunting for the product as relevant product attributes of secondhand furniture. All of these attributes were also identified in the focus group interviews. However, some of the relevant attributes that the literature review identified were not considered very important among the members of the focus groups, such as

the item reflecting personal values, the story of the item, or the satisfaction related to treasure hunting.

Some of the attributes that were listed are highly dependent on the respondent's individual needs. These include attributes such as size and practicality: depending on the respondent, they might only have space for a small sideboard, while some might prefer a bigger one for more storage space. Practicality also means different things to different respondents: for some, it can be a high amount of drawers, while for some it can mean something that is easy to move around. Such attributes that are highly dependent on individual needs will not be included in the research. Also attributes related to the aesthetics of the piece of furniture (attributes such as style, color, design, classy style and retro style) are highly individual and are based on the respondent's personal preferences. To simplify the study, neither aesthetics will not be considered. Some attributes also overlap, such as style, classy style, and retro style, as well as quality, durability, and sturdiness. As concluded in the literature review, sturdiness and durability are both indicators of quality.

This thesis will also not focus on attributes related to service, such as delivery options, warranty, and return policy. "More value for money" and "price" overlap, so only "price" will be considered. From attributes that have some overlap, namely "material" and "easy maintenance" as well as "production" and "origin country", the attribute that got a higher score will be included in the survey ("material" and "origin country"). As discussed in the literature review, a secondhand piece of furniture is sustainable due to the fact that by buying a secondhand item the consumer supports the longer lifespan of an existing product instead of buying a new item. In the interviews, "eco-friendliness" and "avoiding purchasing new items" got the same score, which supports this. Therefore, only "eco-friendliness" will be considered. Additionally, as discussed in the literature review, "durability" and "sturdiness" are both quality attributes. Therefore, "quality" in itself will not be considered. Also the attributes that got a score of 1 or lower are not considered ("treasure hunting", "age" and "brand"). Finally, "customizability" is a somewhat broad attribute, and it means different things to different respondents: for some, it means that for example the shelves of the sideboard can be adjusted, while for some it means that the material

of the item can be stained or painted. For clarity “customizability” will therefore not be considered.

After this process, we are left with 12 attributes: Price, Condition, Durability, Sturdiness, Material, Eco-friendliness, Reflects my values, Origin country, Uniqueness, and Story of the item.

5.2 Survey

After defining the most important attributes of secondhand furniture through the focus group interviews, they were used as a basis for a survey that would take a deeper look into the topic. The survey utilized the best-worst scaling (BWS) method. This section will discuss how the survey was built, tested, and distributed.

5.2.1 Designing the survey

The 12 attributes (Price, Condition, Durability, Sturdiness, Material, Eco-friendliness, Reflects my values, Origin country, Uniqueness, and Story of the item) that were identified through the literature review and the focus group interviews were used to create the 11 statements presented in Table 2. Since price and quality related attributes were ranked as very important in the focus group interviews, they are present in more than one statement. To measure preferences for quality, multiple measures of quality are featured in the statements: “The dresser of sturdy”, “The dresser is durable”, and “The dresser is made from high quality materials”. This allows for measuring which quality-related features consumers prefer the most. To measure preferences for price, two statements were used: “The dresser is 20% cheaper than a similar new dresser” and “The dresser is 40% cheaper than a similar new dresser”. These two statements were not displayed in the same questions, but they were used to measure if a bigger decrease in price

would yield different results. A 20% lower price is not necessarily a very significant saving, but a 40% lower price might already be seen as considerably lower.

#	In English	In Finnish
1	The dresser is 20 % cheaper than a similar new dresser	Lipasto on 20 % halvempi kuin vastaava uusi lipasto
2	The dresser is 40 % cheaper than a similar new dresser	Lipasto on 40 % halvempi kuin vastaava uusi lipasto
3	The dresser is in a good condition	Lipasto on hyvässä kunnossa
4	The dresser is sturdy	Lipasto on tukeva
5	The dresser is durable	Lipasto on kestävä
6	The dresser is made from high quality materials	Lipasto on tehty laadukkaasta materiaalista
7	The dresser is environmentally friendly since it is recycled	Lipasto on ympäristöystävällinen sillä se on kierrätetty
8	The dresser is made in Finland	Lipasto on valmistettu Suomessa
9	The dresser has a story	Lipastolla on tarina
10	The dresser reflects my values	Lipasto heijastaa arvojani
11	The dresser is unique	Lipasto on uniikki

Table 2: Statements used in the first version of the survey

The survey was formulated using a web-based tool called Discover (<https://discover.sawtoothsoftware.com/>). The survey consisted of four main parts: the best-worst scaling questions, questions measuring the respondent's attitudes towards sustainability and green consumption, questions measuring the respondent's attitudes towards secondhand furniture, and demographics questions. In the beginning of the survey before the best-worst scaling questions, the respondents were presented with the following instructions: "Imagine the following situation: You are purchasing a dresser for your home and you have found a used dresser that suits your needs and looks nice. You will now be asked to rank various attributes

related to this dresser. When answering, you can compare the used dresser to for example a similar new dresser from Ikea”. Customers were asked to compare the dresser to a well-known example of a new dresser to make it easier for them to answer the questions and think about the attributes specifically in the context of a secondhand item. This was accompanied with a picture of a dresser that the author owns the rights to, presented in Picture 3 below. After this, the respondent was presented with the best-worst scaling questions and asked to choose from each subset the attribute that is the most important and the least important attribute for them personally when considering this used dresser.



Figure 3: Picture of dresser used in the survey (picture from verdesecondhand.fi).

When formulating the best-worst scaling questions, the author decided to feature a maximum of four attributes per question. This was to make the survey easier to answer for the respondents: more options would have been difficult to assess at once. Therefore, to include every attribute sufficiently many times in the survey (at least 3), the survey included a total of 9 BWS questions.

To measure consumer attitudes towards sustainability, this thesis adapted five questions from the 2019 Kantar TNS survey of Finnish consumers' attitudes towards environmental sustainability

commissioned by the government of Finland (Ympäristöhallinto, 2019). The survey was completed by 1013 respondents between the ages 15-74. The survey utilized a five point Likert scale. Adapting the questions from this questionnaire will allow comparing the results to the national average. The questions that this study will adapt from the Kantar TNS survey to measure consumer attitudes towards environmental sustainability include the following (questions have been translated from Finnish by the author):

1. Climate change is one of the biggest threats in the world globally.
2. I am worried about climate change.
3. I have changed by travelling, eating, or living habits to fight against climate change.
4. I have decreased my consumption of goods due to environmental reasons.
5. I am willing to pay a few percent of my net income to combat climate change, for example through taxation of environmentally harmful goods and services.

To measure the respondent's general interest towards secondhand furniture, a scale with three statements was developed also using the 5-point Likert scale. This set of questions were not tested before the actual survey with a sufficiently large set of respondents but the reliability could be checked only when analysing the responses to the final survey. The statements were the following:

1. I am interested in used furniture
2. I could purchase my furniture used
3. Used furniture are a good alternative to purchasing new furniture

Finally, the demographic questions consisted of the following: gender, age, and working/studying situation.

5.2.2 Testing the survey

Before publishing the survey, it was tested with five volunteers either with an in person interview or through an online video conference call. The volunteers were asked to answer the questionnaire and at the same time talk through their thought process. The volunteers were timed answering the questionnaire, and in the end were asked for any additional comments.

The respondents took on average 10 minutes to finish the questionnaire. In general, respondents found the questionnaire clear, easy to answer, and even relatively fun to do. Statements that some of the respondents found unclear included “The dresser is in a good condition”, “The dresser has a story”, and “The dresser reflects my values”. Respondents commented that “good condition” can mean many things: does it mean that the dresser is clean and does not have big scratches or other marks, or does it mean that the dresser looks like new and does not have any scratches. It was generally agreed that small scratches can be a part of the charm of an old piece of furniture, but it has to be clean and not have any significant scratches or marks. A few respondents also found the dresser having a story a confusing statement, since they were not sure what was meant by that. The statement that the dresser “reflects my values” also caused some debate. Many respondents found overlap with that and statements such as “The dresser is environmentally friendly since it is recycled” and “The dresser is made in Finland”, since sustainability and favouring locally produced items were part of the respondents’ values. On the other hand, the statement “The dresser is made in Finland” was perceived differently by different respondents: most preferred it since they thought that it reflects quality, but some preferred it since they appreciate the design of old Finnish furniture. All test respondents understood that they do not support local manufacturers through the purchase of a secondhand item. To accommodate for the feedback, the following changes were made:

1. “The dresser is in a good condition” was changed to “The dresser is in a good condition and has no scratches”
2. “The dresser has a story” was changed to “The dresser has an interesting history”

3. The statement “The dresser reflects my values” was removed

Table 3 includes the list of the statements used in the final version of the survey. Since one statement was removed, the final version of the survey had 8 BWS questions instead of 9. The other sections of the survey were not changed after the testing, since there was strong pairwise correlation between all statements in both the sustainability set and the secondhand furniture set of questions,

#	In English	In Finnish
1	The dresser is 20 % cheaper than a similar new dresser	Lipasto on 20 % halvempi kuin vastaava uusi lipasto
2	The dresser is 40 % cheaper than a similar new dresser	Lipasto on 40 % halvempi kuin vastaava uusi lipasto
3	The dresser is in a good condition and has no scratches	Lipasto on hyvässä kunnossa eikä siinä ole naarmuja
4	The dresser is sturdy	Lipasto on tukeva
5	The dresser is durable	Lipasto on kestävä
6	The dresser is made from high quality materials	Lipasto on tehty laadukkaasta materiaalista
7	The dresser is environmentally friendly since it is recycled	Lipasto on ympäristöystävällinen sillä se on kierrätetty
8	The dresser is made in Finland	Lipasto on valmistettu Suomessa
9	The dresser has an interesting history	Lipastolla on mielenkiintoinen historia
10	The dresser is unique	Lipasto on uniikki

Table 3: *The statements used in the final version of the survey*

5.2.3 Distributing the survey

The survey was distributed through three main channels: friends and family (for example through the author's own social media networks), the social media channels of the author's secondhand furniture business, and through a Facebook group with 15 000 members dedicated to buying and selling items in the neighbourhood of Lauttasaari, Helsinki ("Lauttasaari kierrättää"). To encourage people to respond, one respondent could win a free item from said secondhand furniture business. The majority of the respondents seemed to come from the Facebook group, as the number of respondents started to increase rapidly after sharing the survey in the group.

6. RESULTS

The survey got in total 255 responses. This section will first identify possible “bad” respondents and then look at the demographics of the respondents as well their attitudes towards both sustainability and secondhand furniture. After that, this section will analyze the respondents’ preferences for secondhand furniture by first looking at the average preferences for secondhand furniture, then finding segments among the respondents, and seeing if the attitudes towards sustainability and secondhand furniture differ across the segments and considering how the preferences and the attitudes are related. Finally, the identified consumer segments will be described.

6.1 Identifying “bad” respondents

Two methods were used to identify bad respondents: using the Hierarchical Bayes (HB) estimation to produce root-likelihood (RLH) scores, and analysing the time respondents spent answering to the survey. The RLH scores were used to compare how the model fits individual responses: respondents’ should perform considerably better than a random set of answers (Sawtooth Software, N.D.). Sawtooth Software manual (N.D.) suggests a minimum RLH score of 0.336 for a BWS questionnaire with four items per set and each item shown three times to the respondent. Based on the RLH scores, the responses were mostly of good quality: only two responses got a RLH score of less than 0.336. Therefore, no responses were removed based on the HB estimation. When looking at the time the respondents spent answering the survey, the data seemed to form a normal distribution without any clear outliers of respondents that would have spent clearly less time answering to the survey. The shortest time spent answering the survey was 2 minutes 32 seconds. Therefore, no responses were removed based on this analysis either.

6.2. Sample description

6.2.1 Demographics

Of the 255 respondents the vast majority was female: 220 respondents or 86% of the sample as seen in Figure 4. 30 were male, 3 other, and 2 preferred not to answer this question. The reason for the large number of female respondents compared to other groups is not certain, but the distribution channels most likely influenced this: most respondents were members of a Facebook group for recycling. As the literature review concluded, secondhand is generally more favoured among females, so it could be assumed that the majority of the members of the said Facebook group were also female.

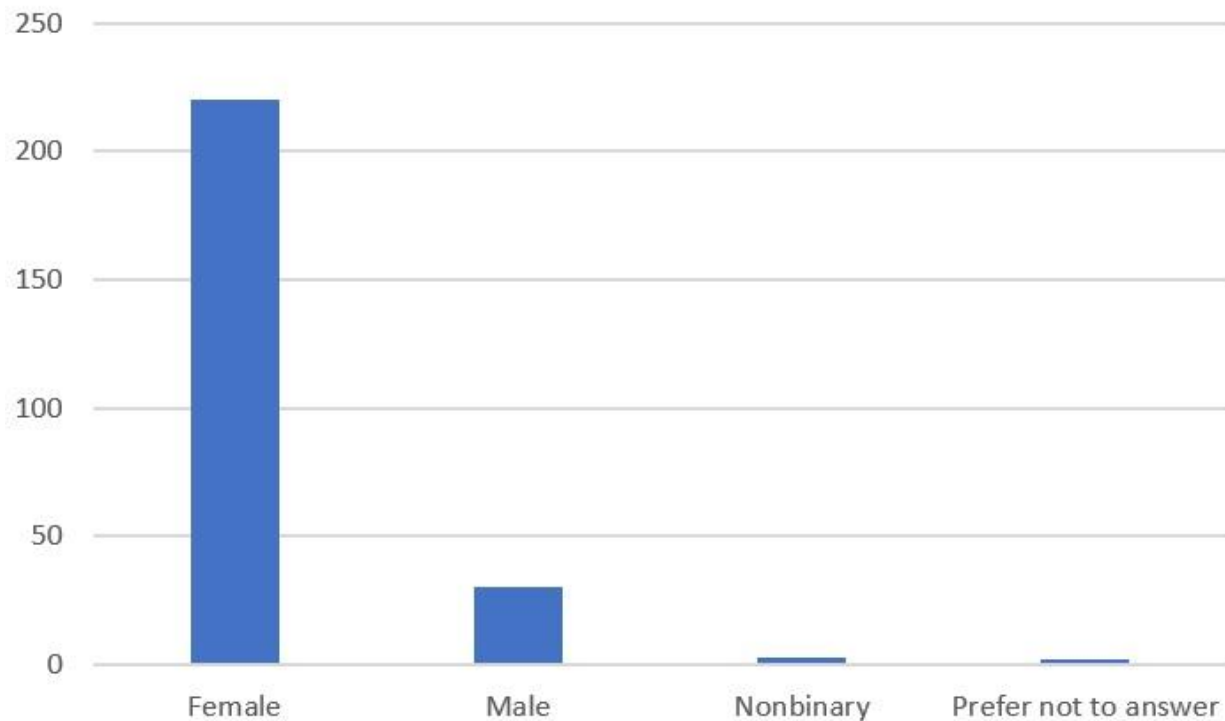


Figure 4: Gender of respondents

Regarding the respondent age, the sample had a clear majority of young adults aged 25 to 29 years old. This could be due to the reason that the author encouraged her friends and colleagues

to answer to the survey, of which most belong to this age group. The distribution of the respondent ages can be seen in Figure 5.

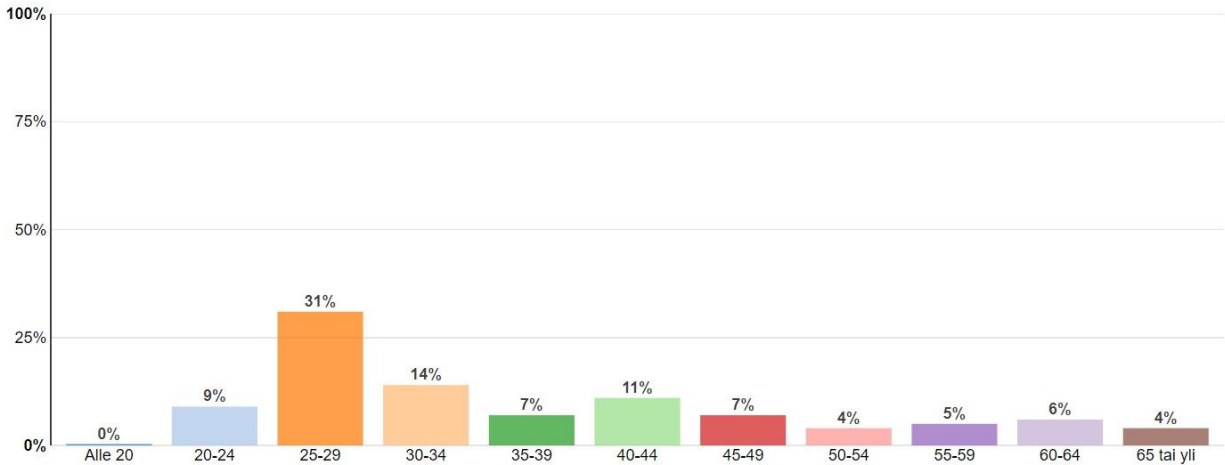


Figure 5: Respondent age distribution

More than half of the respondents were permanently employed (136 respondents, so 54% of the sample). The second and third biggest groups, students who work while studying and temporarily employed, had 33 and 31 respondents respectively. It is worth noting that “retired” was not in the options, so some retired respondents answered that they are unemployed.

Label (translated from Finnish)	Count	Percent
Student	22	9%
Student, working while studying	33	13%
Working part time	9	4%
Employed, temporary contract	31	12%
Employment, permanent contract	136	54%
Entrepreneur	8	3%
Unemployed	13	5%

Table 4: Studying/working situation of the respondents

Some age classes and working situation classes were combined in a meaningful way to reduce the amount of groups to be analyzed. The amount of age groups was reduced from 11 to 4, new groups being 20-29, 30-39, 40-49, and 50+. Working/studying situations were also combined to have fewer groups: the new groups were “employed” (permanent and temporary workers and entrepreneurs), “part time employed” (part time workers and working students), and “unemployed” (students, unemployed, and retirees). The new classes also are expected to possibly reflect different income levels. The distributions of both new variables in the sample can be seen in figures 6 and 7.

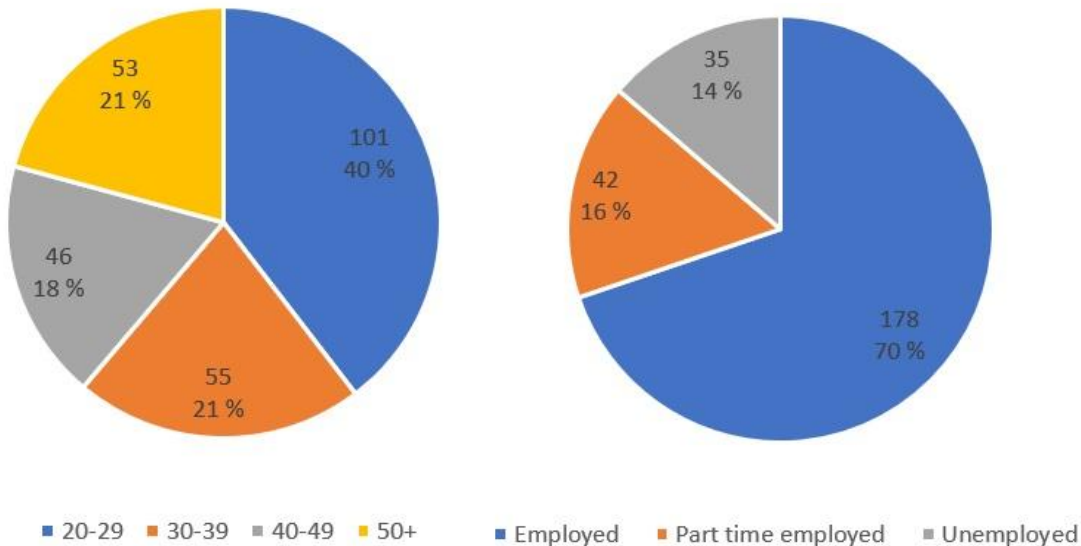


Figure 6 and 7: New age and employment classes of the sample

6.2.2 Attitudes towards sustainable development and secondhand furniture

The respondents were generally concerned about climate change, and had high interest towards secondhand furniture. This is again most likely heavily influenced by the source of respondents - a Facebook group for recycling items in an affluent neighbourhood: members of such a group

can be assumed to be generally interested in sustainability and to also have interest in used goods.

The questions related to attitudes towards sustainability were adapted from the 2019 Kantar TNS survey of Finnish consumers' attitudes towards environmental sustainability commissioned by the government of Finland (Ympäristöhallinto, 2019). The survey was completed by 1013 respondents between the ages 15-74. In the table below the results are compared to the results from the same statements in the national survey. It can be seen that the sample of this study is much more concerned about climate change than the national average is. Again, this might be due to the source of respondents.

Statement	St. Dev.	Mean	National mean
Climate change is one of the biggest threats in the world globally.	0,94	4,47	3,34
I am worried about climate change.	0,80	4,43	3,07
I have changed by travelling, eating, or living habits to fight against climate change.	1,00	3,79	2,3
I have decreased my consumption of goods due to environmental reasons.	1,04	3,9	2,47
I am willing to pay a few percent of my net income to combat climate change, for example through taxation of environmentally harmful goods and services.	1,05	4,05	2,46

Table 5: Comparing respondent attitudes towards sustainability across the sample and the sample reflecting the whole population

Exploratory factor analysis was run on the set of all Likert scale questions. The goal was to check if the statements loaded neatly on two different factors, which was confirmed. The two factors explained $100 \cdot (2,77 + 2,22) / 8\% = 62,4\%$ of the variance and the loadings worked as expected. The Cronbach's alpha for the questions related to attitudes towards sustainability was 0,793 and for the questions related to attitudes towards secondhand furniture 0,800, which means a good level of reliability of the measures. Therefore, new variables "sustainability" (sust) and "furniture" (fur) were introduced by calculating the average of the responses to the respective questions.

6.3. Consumer preferences for secondhand furniture

6.3.1 Average consumer preferences

Figure 8 includes the aggregate scores for all ten attributes of secondhand furniture that were measured through the survey. Interestingly, the attributes' ranks are similar to their ranks assessed on the basis of the focus group interview: therefore, it can be said that the 10 participants of the focus group interviews were generally good representation of the sample as a whole. However, this can not be explicitly concluded since the interviews did not have multiple measures for price and quality unlike the survey did.

Among the ten attributes, the top four clearly stand out from others: the respondents preferred quality material the most, followed by the dresser being durable and in good condition. The fourth most important attribute was the sustainability of the piece of furniture. Some of these attributes go hand in hand, and therefore explain the popularity of each other. For example, furniture that is made from quality material is likely to also be durable. On the other hand, durable furniture that lasts for many years can also be considered sustainable. The attributes related to for example the price, uniqueness, and the story of the item were not favoured as much among respondents.

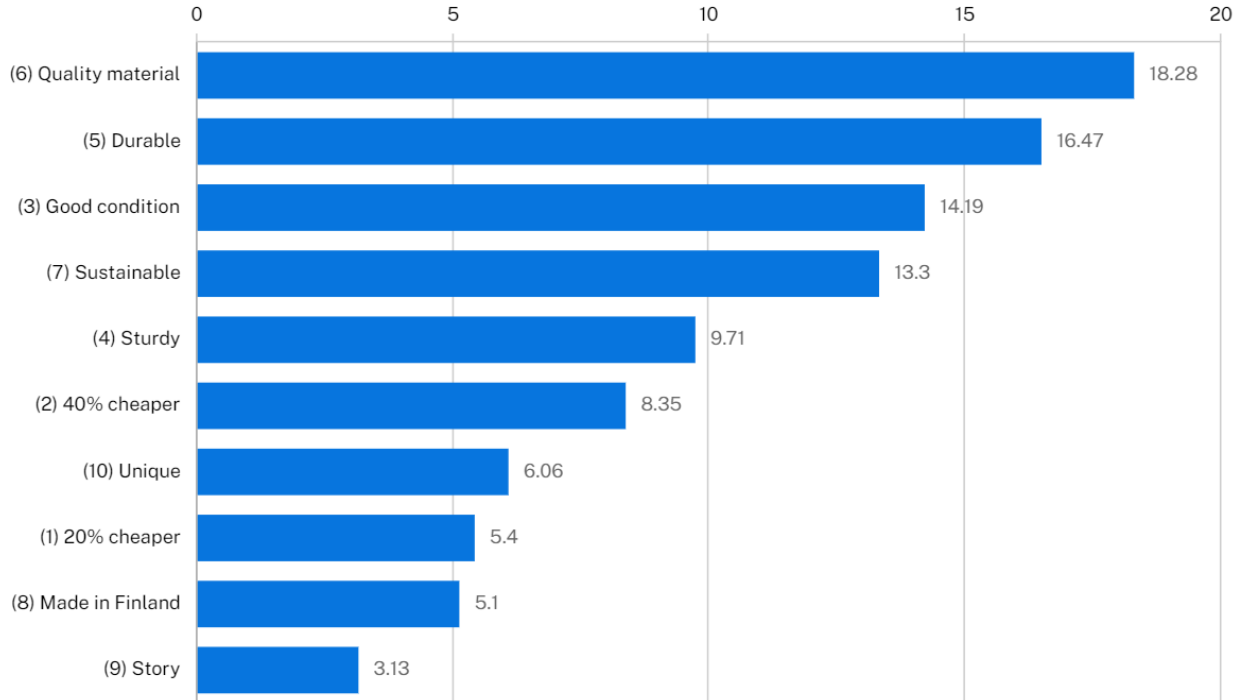


Figure 8: Item scores for all attributes for the whole sample

6.3.2 Segmentation using Latent Class Analysis

Instead of looking at the sample as a whole, segmenting the respondents into categories with distinctive preferences was done to reveal more the heterogeneity of the preferences. In order to do this, Latent Class Analysis (LCA) was performed. Segmentation solutions with 3-6 groups were compared with each other, and the solution with 6 segments was chosen since it had considerably lower BIC and CAIC values than the solutions with less groups. Segmentation solutions with more clusters were not tested, since the cluster sizes would have been too small. In the figure below is the chosen segmentation solution with six segments, the sizes of these segments, and values that reflect the segment preferences. Attributes that were important to that segment compared to the other segments are highlighted with green, and attributes that were not important to that segment when compared to the other segments with red to ease the comparison

of the key differences between the different segments. The scores in figure 9 are a result of conversion of the raw weights to a 1-100 scale: in the attribute scores are directly comparable with each other and ratio scaled (Sawtooth Software, N.D.). The groups were arranged based on the importance they placed on the sustainability of the item, with the first group placing the highest importance on sustainability.

Segment size	15 %	14,60 %	19,50 %	15,80 %	22,60 %	12,50 %
20% cheaper	5,1	8,7	0,5	0,6	4,3	18,4
40% cheaper	10,8	11,6	0,6	1,0	9,2	24,3
good condition	4,3	6,1	14,2	12,1	25,9	16,9
sturdy	14,4	5,3	12,7	8,4	9,3	7,3
durable	20,8	12,0	21,2	11,9	18,5	13,0
quality material	17,3	12,2	24,2	19,3	21,1	10,7
sustainable	21,9	16,3	16,1	10,1	7,3	7,1
made in Finland	3,5	4,1	7,9	5,2	2,6	1,8
interesting story	0,8	3,0	1,3	13,5	0,6	0,2
unique	1,2	20,8	1,3	18,1	1,2	0,3

Figure 9: Segments found through LCA

From now on, the segments will be given the following names for the remaining analysis part that are based on their defining features in order to simplify the analysis:

1. “Sustainability” - This segment puts the highest emphasis on sustainability, while also valuing the item being sturdy and durable. This group does not care much about the condition of the item.
2. “Uniqueness” - This segment prefers the item to be unique, and they do not care much about the condition of the item.
3. “Quality” - This segment emphasizes quality material and the item being durable. They are not very price sensitive.

4. “Story” - This segment appreciates the item having an interesting story, in addition to it being unique and made of quality material. This segment is not very price sensitive.
5. “Condition” - This segment prefers the item to be in excellent condition. They also value it being durable and made from quality material.
6. “Price” - This segment is price sensitive, and tends to choose the cheaper item. They do not care much about the sustainability, story, or uniqueness of the item.

6.3.4 Differences in demographics across segments

The demographics of the segments were analyzed first. Crosstabulation and chi-square tests were used to look at if gender, age, or working situation are dependent on the cluster membership. When analyzing the gender of the respondents across segments, other than the classes female/male were filtered due to the small amount of observations. In the chi-square test for gender, $p = 0,037$, meaning that, with risk level $\alpha = 0,05$ (used in all the tests in the sequel), gender and the segment are dependent.

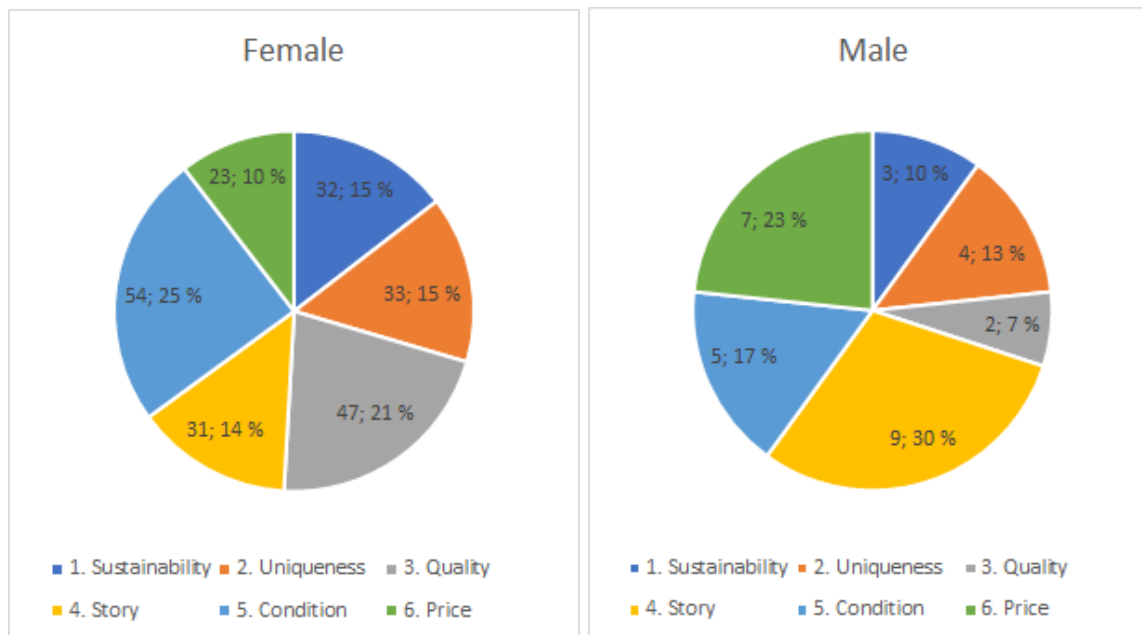


Figure 10 and 11: Gender of respondents across segments

Due to the small amount of male respondents, the conclusions on gender and segment membership are not very reliable: as seen in Figure 11, the amount of male respondents in three groups is less than 5. However, from figures 10 and 11 some segments in which there are the biggest gender differences can be identified: males are more likely than females to belong into segments 4 “Story” and 6 “Price”, in other words to segments that do not value sustainability very much. Male respondents also do not often belong to segment “3. Quality”.

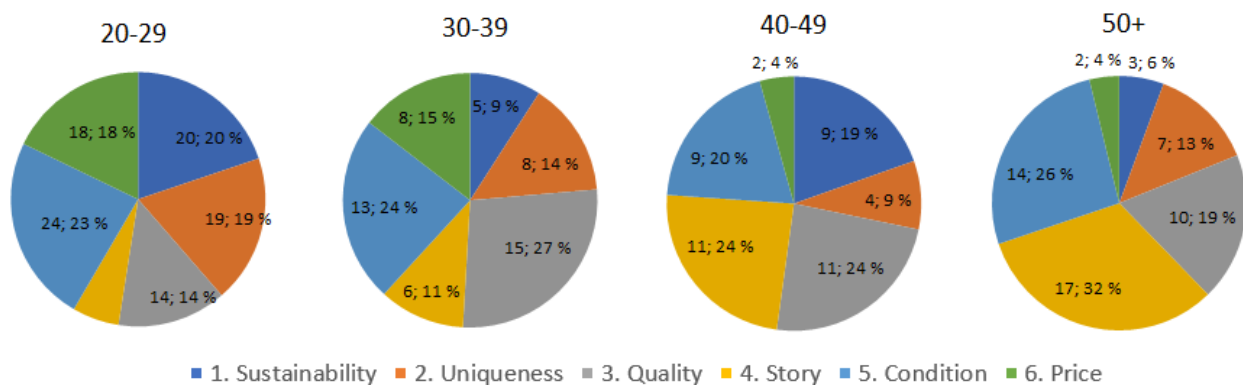


Figure 12: Age groups across segments

In the chi-square test for age, $p = 0,000$, meaning that with $\alpha = 0,05$ age and the segment are dependent. Figure 12 presents the distribution of age groups across segments. Among the youngest respondents aged between 20 and 29, the most popular segment is segment “5. Condition” with 23% of the respondents belonging to this segment. Also segments “1. Sustainability”, “2. Uniqueness”, and “6. Price” are popular. Segment “4. Story” is the least popular among the youngest respondents. Compared to the other age groups, segments “1. Sustainability”, “2. Uniqueness” and “6. Price” are relatively more popular among this age group, while “3. Quality” and “4. Story” are less popular.

Among the second age group consisting of 30-39 year olds, the most popular segment is “3. Quality” with 27% of the respondents belonging to this segment, followed by “5. Condition” with 24% of the respondents. The rest of the segments are fairly even, with the sustainability segment being the least common. Compared to the other age groups, segments “3. Quality” and

“6. Price” are relatively more popular among this age group, while “1. Sustainability” and “4. Story” are less popular.

Respondents aged 40-49 most often belong to segments “3. Quality” or “4. Story”, with both of these segments having 24% of the respondents in this age group. The least popular segment for respondents in this age group is segment “6. Price”. Compared to the other age groups, segments “1. Sustainability” and “4. Story” are relatively more popular among this age group, while “2. Uniqueness” and “6. Price” are less popular.

The oldest respondents in the age group consisting of 50+ year olds most commonly belong to the segment “4. Story” with 32% of the respondents, followed by segment “5. Condition” with 26% of the respondents. Respondents in this age group rarely belong to the “1. Sustainability” or “6. Price” segments. Compared to the other age groups, segment “4. Story” is relatively more popular among this age group, while “1. Sustainability” and “6. Price” are less popular.

In the chi-square test for work situation and segment membership $p = 0,069$. As this is higher than alpha 0,05, we conclude that the working situation of the respondent and segment membership are independent.

6.3.3 Differences in attitudes towards sustainability and secondhand furniture across segments

Based on the one way Anova test, the attitudes towards both sustainability ($p = 0,002$) and towards secondhand furniture ($p = 0,010$) are not the same across the clusters. The segments were ranked according to the importance the segment had put on the sustainability attribute, with group 1 being the “Sustainability” group that values the sustainability of the item the most, while segment 6 valued it the least. In figure 16 we see that also the average sustainability score is the highest among segment 1, and decreases monotonically when moving to segment 6. The

respondents attitudes towards secondhand furniture seem to go hand in hand with their attitude towards sustainability: segments that are more interested in sustainability also have a higher interest towards secondhand furniture. The level of the mean scores across all segments for attitudes towards both sustainability and secondhand furniture are high, with scores ranging between 3,9 to 4,9. Therefore, it cannot be said that some segments would not display interest towards it either: on average, all respondents partly or fully agreed with the statements related to interest towards sustainability and secondhand furniture.

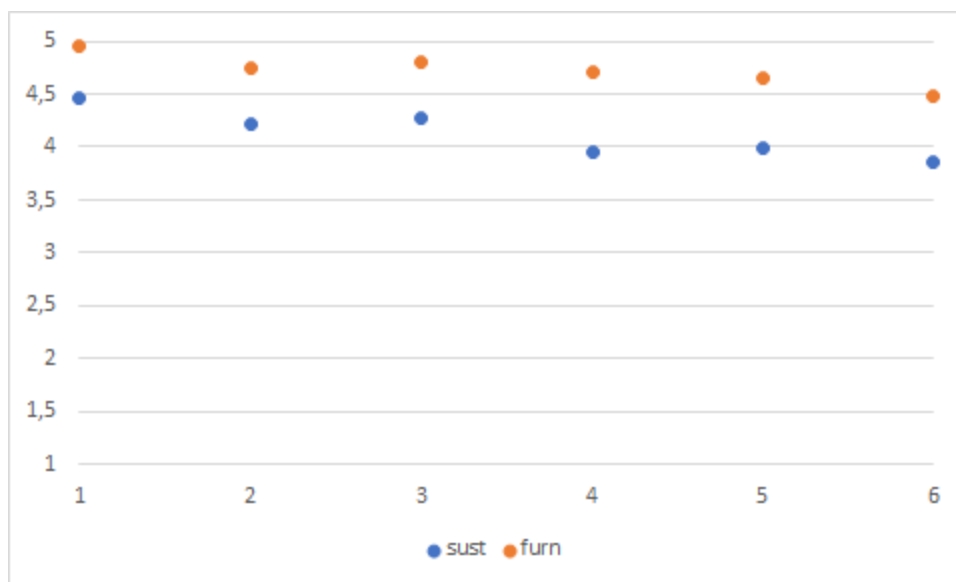


Figure 13: Sustainability and interest towards secondhand furniture scores across segments

Dunnett's T3 test was done to compare pairwise the segments in pairs. In attitudes towards sustainability, there were significant differences between segment "1. Sustainability" and segments "4. Story", "5. Condition", and "6. Price" - in other words, between the group that preferred the sustainability of the item the most and the least. When looking at interest towards secondhand furniture, segment "1. Sustainability" and segments "5. Condition" and "6. Price" had significant differences between them - again the segments that preferred the sustainability of the item the most and the least. Based on this, the segment "1. Sustainability" and segments "5. Condition" and "6. Price" seem to be extremes when looking at these two variables.

6.3.4 Cluster profiling

“Sustainability” - Interested in sustainable values and secondhand furniture (15% of respondents)

This segment puts the highest emphasis on the sustainability of the item off all the segments. The respondents in this segment also value the item being sturdy and durable. This makes sense, as sturdy and durable items are likely to last long, thus contributing to the sustainability of the item. This group does not care much about the condition of the item, which could mean that they either appreciate the look and character of old furniture, or that they do not mind fixing them. The price sensitivity of this segment is at medium level. This segment has somewhat more female than male respondents. Interestingly, the majority of the respondents in this segment are either 20-29 or 40-49 years old. It is not very popular among 50+ year olds. This segment had the highest interest in sustainable values as well as in secondhand furniture among all the segments, which goes hand in hand with them preferring sustainable items and not minding the condition of the item that much.

“Uniqueness” - Seeking for something special in whatever condition (15% of respondents)

This segment prefers the item to be unique above anything else. They do not care much about the condition of the item, which could mean that they do not mind fixing the item or that they appreciate the worn look of old furniture. The price sensitivity of this segment is at medium level. This segment prefers the sustainability of the item somewhat, but does not care as much about the quality of the item as the rest of the segments. The respondents in this group are likely to choose secondhand items over new ones in order to get a unique item that not a lot of other people have. This segment is equally popular among both female and male respondents, and has respondents of all ages, even though it is slightly more popular among younger respondents.

“Quality” - High quality furniture no matter the price (20% of respondents)

This segment emphasizes the quality of the item: the respondents in this group preferred all the attributes related to quality, including the item being made of quality material and being durable

and sturdy. Also the sustainability of the item is relatively important for this segment. This segment also valued the item being made in Finland the most of all the segments, which can be related to the notion that generally domestic products are considered to be of high quality. The respondents in this segment probably choose secondhand furniture over new items if they feel that the older item is of better quality, and also partly due to environmental reasons. The respondents that belong to this segment are not price sensitive. There are relatively more females in this group, and they tend to be 30-49 years old. This segment is not popular among the youngest age group, maybe due to the fact that younger respondents cannot often afford choosing quality over price.

“Story” - Older people who appreciate furniture with interesting history (16% of respondents)

This segment is the only segment that appreciates the item having an interesting history. In addition to the interesting history, they value it being unique and made of quality material. This segment is not very price sensitive. This segment is more popular among males than females. There are respondents of all age groups in this segment, but its popularity increases with age, it being the most popular segment among 50+ year old respondents. It is possible that older people appreciate the history of furniture items more since they might have accumulated more items with sentimental value and histories, for example by inheriting old furniture items. Sustainable values are not highly important to the members of this segment. This segment might choose secondhand furniture over new if it has an interesting history or it for example evokes feelings of nostalgia.

“Condition” - Wants secondhand that looks new (23% of respondents)

This segment prefers the item to be in excellent condition. They also value it being durable and made from quality material. This segment does not value sustainability, and does not care if the item has an interesting history or is unique. The price sensitivity of this segment is medium level. This segment is somewhat more popular among female respondents, and it has people of all age groups. The members of this segment are not as interested in sustainable values or in secondhand

furniture. Therefore, this group likely prefers their items new, but is willing to choose secondhand if they can get a higher quality used item that looks new as they would get purchasing a new item in the same price range.

“Price” - Selects the cheapest option (13% of respondents)

This segment is price sensitive, and tends to always choose the cheaper item. They do not care much about the sustainability, story, or uniqueness of the item. The condition of the item is relatively important to them, so they most likely do not want the piece of furniture to look old or to have to fix it. This segment cares the least about the item having an interesting story or being unique, and they are not as interested in sustainable values or in secondhand furniture. Therefore, this segment is likely to choose secondhand furniture over new furniture if they can get it for a cheaper price, given that the item is in a relatively good condition. This segment has relatively more males, and is the most common among respondents aged 20-29, but it has respondents of all ages.

8. DISCUSSION AND CONCLUSIONS

This thesis provided information regarding the value of different attributes to consumers of secondhand furniture, as well as identified different customer segments with heterogeneous preferences. It also compared the demographics, the attitudes towards sustainability, and interest towards secondhand furniture between the different segments that were identified. The research consisted of a literature review, followed by focus-group interviews and a survey that utilized the best-worst scaling methodology.

8.1 Revisiting the research questions

This thesis was motivated by the author founding a secondhand furniture business, and thus wanting to understand consumer preferences better and find out reasons why people choose secondhand furniture over new items. It sought to answer the following research questions:

Q1. What attributes of secondhand furniture consumers value the most?

Based on the survey that was conducted, consumers value the following four attributes of secondhand furniture the most (in order of decreasing importance): quality material, durability, good condition, and sustainability. The other attributes in the order of importance were sturdiness, a 40% lower price than a new item, uniqueness, a 20% lower price than a new item, the item being made in Finland, and finally the story of the item.

Some of these attributes are related to each other, and therefore explain the popularity of each other. For example, quality material, durability, and sturdiness are all indicators of the overall quality of the item. Additionally, a durable item that is made from quality materials is more likely to last long, which therefore makes it more sustainable than a lower quality item.

Even though a lower price is something that might be one of the first things that come to mind for many people when thinking about used furniture, a lower price compared to a similar new item was not among the most important attributes for the respondents. Generally they were more motivated by quality related attributes, as well as the sustainability of the secondhand furniture item. Since secondhand items are not by default higher quality than new items, this could mean that for many the reason to choose secondhand is not an absolutely lower price, but being able to purchase a higher quality item for the same amount of money. For example, a secondhand dresser made from wood might cost approximately the same as a new dresser made from particle board, so consumers select the secondhand item due to the higher quality.

Q2. Can different consumers segments with differing preferences be identified and if so, what are they?

The research identified six consumer segments with differing preferences. These included the following segments (in the order of the size of the segment):

- “Condition” (23% of respondents): Prefer secondhand items to look new. Don’t value the sustainability or uniqueness of the item, and do not care that much about sustainability in general or about secondhand furniture. Likely prefer their items new, but might choose secondhand if the item is in good condition and is higher quality than a similarly priced new item would be.
- “Quality” (20% of respondents): Prefer high quality furniture and do not care about the price. Moderately interested in sustainability, so they might choose high quality secondhand items over new ones due to environmental reasons in addition to the quality.
- “Story” (16% of respondents): Generally older people who appreciate secondhand furniture with interesting history. Do not care much about the price of the item, but also value uniqueness in addition to quality materials. Most likely to choose secondhand furniture if the item has an interesting story or for example evokes feelings of nostalgia.

- “Sustainability” (15% of respondents): Interested in sustainable values and secondhand furniture, choose secondhand mostly due to the sustainability of it. They also value the durability of the item, but the condition is not that important.
- “Uniqueness” (15% of respondents): Seek for something special in whatever condition. Moderately interested in sustainability, but do not mind the quality of the item. Likely to choose secondhand mainly to get something unique that not a lot of other people have, in addition to environmental reasons.
- “Price” (13% of respondents): Select the cheapest option and do not care much about the sustainability, story, or uniqueness of the item. Moderately interested in the condition of the item. Likely to choose secondhand if it is cheaper than a similar new item would be.

Q3. How are consumer preferences linked to their attitudes towards sustainability?

Most of the respondents displayed high interest towards sustainability, but this study was able to identify some links between a higher interest towards sustainability and consumer preferences for secondhand furniture. The consumer segment that had the highest interest towards sustainability preferred the sustainability of the item above all other attributes, while segments with lower interest towards sustainability preferred other attributes such as the item being cheap or in good condition. Segments that were less interested in sustainability displayed lower interest towards secondhand furniture in general. So, to conclude, consumers that are interested in sustainability in general will choose secondhand furniture over new furniture since it is more environmentally friendly, while consumers with lower interest towards sustainability will choose secondhand for other reasons such as the lower price of secondhand furniture.

8.2 Reliability, validity, and limitations of the study

Some limitations of this study include a relatively small sample size, and the sample representing a fairly narrow set of consumers. All the respondents were from Finland, and most of them were either fellow university students, customers of the author’s secondhand business, or members of

a Facebook group dedicated to buying and selling items in the Lauttasaari area in Finland. Therefore, the respondents were supposedly mainly from the capital region, and might be on average of above average socio-economic class. They are also more likely on average to be interested in sustainability and secondhand furniture.

Even if the attributes measured through the survey might not be the perfect set of attributes related to secondhand furniture, efforts had been made to end at a well justified set. The attributes were based on the literature review and on focus-group interviews. There were 12 members in the focus groups. More thorough research on the attributes before formulating the survey might have yielded different results. Finally, the best-worst scaling questions are fairly repetitive, so respondents might get tired of answering which might affect their answers. However, the fit of the measurements, RLH, indicated that the RLH was “too” low for only two respondents.

There was also a price that was given away as a reward for responding to the survey, which might attract respondents who are not very motivated to answer the survey but are interested in winning the price.

8.3 Managerial implications

The results of this research can be implied to the author’s own secondhand furniture business as well as other similar businesses. The author can take into account the most preferred attributes of secondhand furniture when buying secondhand furniture to sell. For example, since quality material was the most preferred attribute across segments, paying close attention to the material of the item and avoiding items made from poor quality materials. So far the author has often emphasized the looks of the items since she herself appreciates unique and interesting pieces, but based on the results a better strategy could be to focus on high quality, sturdy items and are in

good condition. After all, only 15% of the sample belonged in the “Uniqueness” segment with her.

In addition to purchasing, the consumer preferences as well as the six different consumer segments that were identified can be referred to for marketing purposes. The segment that was very price conscious was relatively small, so emphasizing other attributes such as quality and condition of the item might provide better results. Most consumers prefer an item that is in good condition and does not have any scratches, and the ones that do not mind the condition as much are often looking for more special and unique finds. Therefore, “staple items” should be preferably sold in good condition, whereas with more specialty items it does not matter as much. The sustainability of the item was also preferred by many, so the information related to the sustainability of secondhand furniture should be communicated to the consumer. Unlike with new furniture, most consumers don’t care about the origin country of secondhand pieces. The story behind the item is important for a niche that consists mainly of older consumers.

In addition to the commercial value, understanding the reasons that drive the consumption of secondhand products is valuable information in fighting climate change and attempting to get more and more consumers to make more sustainable consumption choices.

8.4 Topics for further research

Referring to the limitations of this research, further research could be conducted on a larger and more diverse sample. As the sample of this survey was generally very interested in sustainability and secondhand furniture, it would be interesting to research the preferences of consumers that are less interested in these topics to see what could make them choose secondhand furniture over a new item. Further research could also look at different types of secondhand products, such as secondhand clothes or for example sports gear. Finally, further research can apply other methodologies to deepen the understanding of consumer preferences for secondhand furniture.

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APPENDIX A: Survey Design

Every question was on its own page with a “Next” button and a progress bar at the bottom of the page.

Gradututkimus preferensseistä liittyen käytettyihin huonekaluihin

Kiitos kun klikkasit kyselyyni! Olen kuudennen vuoden opiskelija Aalto-yliopiston Kauppakorkeakoulusta ja kirjoitan graduani käytetyistä huonekaluista. Haluaisin kysyä sinulta muutaman kysymyksen siitä, mitä arvostat käytetyissä huonekaluissa.

Tämän kyselyn vastaukset ovat täysin anonyymejä, ja niitä hyödynnetään vain tässä tutkimuksessa. Mikäli teillä on kysyttävää, niin minuun voi olla yhteydessä sähköpostitse osoitteeseen vivika.viikari@aalto.fi.

Kyselyyn vastaaminen kestää noin 10 minuuttia.

Tietoa tutkimuksesta

Osallistuminen tähän tutkimukseen on vapaaehtoista. Voit keskeyttää kyselyyn vastaamisen koska tahansa. Keskeyttämisestä ei koidu negatiivisia seuraamuksia, mutta siihen asti kerättyä dataa voidaan hyödyntää tutkimuksessa tietosuojalain mukaisesti. Kyselyssä ei ole oikeita ja väärä vastauksia.

Kaikki kerätty data käsitellään anonyymisti ja luottamuksellisesti, eikä sellaista tietoa (esimerkiksi IP-osoitetta) kerätä, jolla vastaukset pystyisi yhdistämään sinuun. Sähköpostiosoitteen kertominen arvontaan osallistumiseksi on vapaaehtoista, eikä sähköpostiosoitetta yhdistetä vastauksiisi. Vain sukupuoli, ikä, ja työ/opiskelutilanne kysytään tutkimuksessa.

Tutkimuksen tulokset voidaan julkaista tieteellisissä julkaisuissa. Mitään henkilökohtaista tietoa ei julkaista, tallenneta tai jaeta.

Tätä tutkimusta hallinnoi Vivika Viikari (vivika.viikari@aalto.fi).

- ☐ Haluan osallistua tutkimukseen
- ☐ En halua osallistua tutkimukseen

Kuvittele seuraava tilanne:

Olet ostamassa kotiisi lipastoa ja olet löytänyt tarpeisiisi sopivan **käytetyn** lipaston, joka miellyttää sinua myös ulkonäkönsä puolesta. Saat seuraavaksi arvioitavaksesi erilaisia lipastoon liittyviä ominaisuuksia. Kysymyksiin vastatessasi voit vertailla käytettyä lipastoa esimerkiksi vastaavaan uuteen Ikean lipastoon.



Kuva: www.verdesecondhand.fi

Mikä seuraavista käytetyn lipaston ominaisuuksista on sinulle tärkein ja mikä vähiten tärkeä?

1 / 8

Tärkein		Vähiten tärkeä
<input type="radio"/>	Lipasto on uniikki	<input type="radio"/>
<input type="radio"/>	Lipasto on ympäristöystävällinen sillä se on kierrätetty	<input type="radio"/>
<input type="radio"/>	Lipasto on valmistettu Suomessa	<input type="radio"/>
<input type="radio"/>	Lipasto on hyvässä kunnossa eikä siinä ole naarmuja	<input type="radio"/>

Mikä seuraavista käytetyn lipaston ominaisuuksista on sinulle tärkein ja mikä vähiten tärkeä?

2 / 8

Tärkein		Vähiten tärkeä
<input type="radio"/>	Lipasto on kestävä	<input type="radio"/>
<input type="radio"/>	Lipasto on valmistettu Suomessa	<input type="radio"/>
<input type="radio"/>	Lipasto 20 % halvempi kuin vastaava uusi lipasto	<input type="radio"/>
<input type="radio"/>	Lipasto on tehty laadukkaasta materiaalista	<input type="radio"/>

Mikä seuraavista käytetyn lipaston ominaisuuksista on sinulle tärkein ja mikä vähiten tärkeä?

3 / 8

Tärkein		Vähiten tärkeä
<input type="radio"/>	Lipasto on valmistettu Suomessa	<input type="radio"/>
<input type="radio"/>	Lipasto on 40 % halvempi kuin vastaava uusi lipasto	<input type="radio"/>
<input type="radio"/>	Lipasto on tukeva	<input type="radio"/>
<input type="radio"/>	Lipastolla on mielenkiintoinen historia	<input type="radio"/>

Mikä seuraavista käytetyn lipaston ominaisuuksista on sinulle tärkein ja mikä vähiten tärkeä?

4 / 8

Tärkein		Vähiten tärkeä
<input type="radio"/>	Lipasto on hyvässä kunnossa eikä siinä ole naarmuja	<input type="radio"/>
<input type="radio"/>	Lipasto on kestävä	<input type="radio"/>
<input type="radio"/>	Lipasto on 40 % halvempi kuin vastaava uusi lipasto	<input type="radio"/>
<input type="radio"/>	Lipasto on ympäristöystävällinen sillä se on kierrätetty	<input type="radio"/>

Mikä seuraavista käytetyn lipaston ominaisuuksista on sinulle tärkein ja mikä vähiten tärkeä?

5 / 8

Tärkein		Vähiten tärkeä
<input type="radio"/>	Lipasto 20 % halvempi kuin vastaava uusi lipasto	<input type="radio"/>
<input type="radio"/>	Lipastolla on mielenkiintoinen historia	<input type="radio"/>
<input type="radio"/>	Lipasto on uniikki	<input type="radio"/>
<input type="radio"/>	Lipasto on kestävä	<input type="radio"/>

Mikä seuraavista käytetyn lipaston ominaisuuksista on sinulle tärkein ja mikä vähiten tärkeä?

6 / 8

Tärkein		Vähiten tärkeä
<input type="radio"/>	Lipastolla on mielenkiintoinen historia	<input type="radio"/>
<input type="radio"/>	Lipasto on tehty laadukkaasta materiaalista	<input type="radio"/>
<input type="radio"/>	Lipasto on hyvässä kunnossa eikä siinä ole naarmuja	<input type="radio"/>
<input type="radio"/>	Lipasto 20 % halvempi kuin vastaava uusi lipasto	<input type="radio"/>

Mikä seuraavista käytetyn lipaston ominaisuuksista on sinulle tärkein ja mikä vähiten tärkeä?

7 / 8

Tärkein		Vähiten tärkeä
<input type="radio"/>	Lipasto on tukeva	<input type="radio"/>
<input type="radio"/>	Lipasto 20 % halvempi kuin vastaava uusi lipasto	<input type="radio"/>
<input type="radio"/>	Lipasto on ympäristöystävällinen sillä se on kierrätetty	<input type="radio"/>
<input type="radio"/>	Lipasto on valmistettu Suomessa	<input type="radio"/>

Mikä seuraavista käytetyn lipaston ominaisuuksista on sinulle tärkein ja mikä vähiten tärkeä?

8 / 8

Tärkein		Vähiten tärkeä
<input type="radio"/>	Lipasto on 40 % halvempi kuin vastaava uusi lipasto	<input type="radio"/>
<input type="radio"/>	Lipasto on uniikki	<input type="radio"/>
<input type="radio"/>	Lipasto on tehty laadukkaasta materiaalista	<input type="radio"/>
<input type="radio"/>	Lipasto on tukeva	<input type="radio"/>

	Täysin eri mieltä	Jokseenkin eri mieltä	En samaa enkä eri mieltä	Jokseenkin samaa mieltä	Täysin samaa mieltä
Ilmastonmuutos on yksi suurimmista globaaleista uhista maailmassa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Olen huolissani ilmastonmuutoksesta	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Olen muuttanut liikkumistani, ruokailutottumuksiani tai asumisratkaisujani ilmastonmuutoksen hillitsemiseksi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Olen vähentänyt tavaroiden hankkimista ilmastoystävällisyyttä	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Olen valmis siihen, että ilmastonmuutoksen hillintätoimet aiheuttavat minulle kustannuksia muutaman prosentin nettotuloistani esim. haattaverojen kautta	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Kiinnostus käytettyjä huonekaluja kohtaan

	Täysin eri mieltä	Jokseenkin eri mieltä	En samaa enkä eri mieltä	Jokseenkin samaa mieltä	Täysin samaa mieltä
Minua kiinnostaa käytetyt huonekalut	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Voisin ostaa huonekaluni käytettynä	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Käytetyt huonekalut ovat vartenotettava vaihtoehto uusien huonekalujen hankkimiselle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Sukupuoli

- ☐ Nainen
- ☐ Mies
- ☐ Muu
- ☐ En halua sanoa

Ikä

- ☐ Alle 20
- ☐ 20-24
- ☐ 25-29
- ☐ 30-34
- ☐ 35-39
- ☐ 40-44
- ☐ 45-49
- ☐ 50-54
- ☐ 55-59
- ☐ 60-64
- ☐ 65 tai yli

Työ/opiskelutilanne

- ☐ Opiskelija
- ☐ Opiskelija, töissä opintojen ohella
- ☐ Osa-aikatöissä
- ☐ Määräaikaisessa työsuhteessa
- ☐ Vakituksessa työsuhteessa
- ☐ Yrittäjä
- ☐ Työtön

Jos haluat osallistua arvontaan, niin jätä tähän sähköpostiosoitteesi. Tämä on vapaaehtoista.